



The Armed Horde



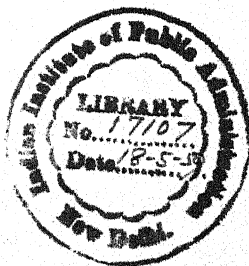
THE ARMED HORDE

1793-1939

*A Study of the Rise, Survival and
Decline of the Mass Army*

By
HOFFMAN NICKERSON

"Universal, conscript, military service... with its twin brother universal suffrage... has mastered all continental Europe, ... with what promises of massacre and bankruptcy for the Twentieth Century!"—TAINE: "Origines De La France Contemporaine," 1891.



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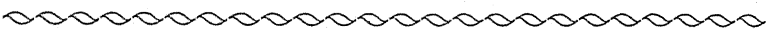
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No statement of fact or opinion in the following pages, however, is chargeable to any of these gentlemen. For all such statements I must take full responsibility.



Author's Preface

THIS BOOK TRACES the origin, survival, culmination and recent decline of the mass army recruited by universal, compulsory service which, with its corollaries of unlimited taxation and governmental control over the governed, has so evilly transformed warfare during the last hundred and fifty years. Since the two agents of the process have been Democracy and Prussianism, we must conflict with those who use Democracy as a slogan or substitute for religion; but this conflict cannot be helped and the matter is too important to be shirked. Less hasty readers, let us hope, will remember that Democracy and Despotism have not always been divorced. What tyrant is so despotic as a tyrannous majority? Indeed what tyrant could be very tyrannous without at least the passive consent of the majority? No dictator, aristocracy, or admitted oligarchy, but the United States, recently tried throughout fourteen years of peace to control the diet of its citizens through the Prohibition Amendment.

Further, the author would not be understood as opposing the recent adoption of compulsory service by the United States. Although the mass army has been and is a curse to mankind, and although the indications of its decline in military value as compared with smaller bodies of more highly trained troops are welcome as hopeful indications of a better future, nevertheless a low trained mass is still an essential part of any first-rate military effort by land. Once a nation has decided to prepare for such an effort, then such a mass is necessary. The one way to prove it unnecessary would be to show that no grave emergency is to be feared. Although the mass army is in itself a potential revolution, and although prolonged mass warfare can hardly end except in an actual revolution on the defeated side, nevertheless foreign conquest might obviously be worse. The hope for abolishing the barbarous

armed horde lies not only in the future of military technique but also in the future of Christendom.

In the opposite direction, readers impressed by the possible consequences of the war which continues as these lines are written may doubt whether the "curve" of war is really descending. As to this, however, the evidence as to the small losses incurred since the first of September, 1939, is overwhelming. This has been true not only of the various land campaigns but also of the Anglo-German air warfare which has been the chief military activity since the text of the last chapter was written. It cannot be too often repeated that the principal effect of air-raids is to distress people by breaking up the ordinary course of civil life. As yet the actual destruction of life and property has been small out of all proportion to the effort made. This truth, so the author believes, will become clearer with time.

Whether the universal lack of military enthusiasm, as compared with 1914, and the relative bloodlessness of recent military theory and practise, foreshadow a new period of comparative peace, we do not yet know. The continued survival, or the gradual disappearance of the mass army, which is the chief symptom of governmental despotism, will be the test.

HOFFMAN NICKERSON

7 October 1940.
New York City.



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The Armed Horde





Chapter I

War and Society

"A war both arises and derives its nature from the ideas, feelings, and political relations which obtain at the moment when it breaks out."—CLAUSEWITZ.

"Military institutions are intimately bound up with that state of culture which the nation has attained."

—VON DER GOLTZ.

MERELY TO DENOUNCE WAR, which today overshadows the world, is as futile as the beating of witch drums in a sick room by some tribal medicine man. Civilized doctors, instead of denouncing disease, try to understand it. In the same spirit let us examine the necessary relations between war, military institutions, and the social order.

First then, what is war? It is the use of organized force between human groups pursuing contradictory policies.

Clearly force, although not the chief instrument by which men are governed, can never be wholly banished from human affairs. That chief instrument is persuasion. Reasonably peaceful and orderly communities can exist because the enormous majority of their members agree on the justice and decency of certain ways of living defined in laws and customs. But in the nature of man such an agreement can never be perfect. Differences of one kind and another will necessarily arise. Usually these can be resolved by argument and exhortation, in short by wars of words, but not always. For instance most communities are opposed to murder and theft, and most men refrain from crime not from compulsion but from a sense

of right, yet individuals and little groups or gangs are always being irresistibly tempted to rob and kill. Given our human weakness, it is dangerous to let criminals show the world by success that "to rob and pillage is a good life." The weaker brethren are less likely to yield to temptation if there is a good chance of their being caught and punished. Consequently, all communities make good their authority and discourage crime by maintaining organized force always ready for use against criminals, in other words by exercising police power. There may have been, and there may be now, exceptional communities able to get along without policing, if so they are so trivial and obscure that they only prove the rule. Should the criminals resist, then the police officers pass from words to blows, using violence upon the offenders, in grave cases even killing them. A few eccentric anarchists of whom the most conspicuous modern was Tolstoy, have denied the right to kill in self defense or in the defense of the community. In the Christian world such people have usually based their argument upon their private interpretation of certain sayings of Our Lord which they quote against the general body of his teaching. But for the average man the necessity for police power is too obvious for argument, without it peaceable folk would everywhere be at the mercy of any chance ruffian. Therefore, force, although subordinate to persuasion, is necessary to government.

So far we have been talking only of the forcible repression of crime, not of war. But if we admit the justice and necessity for police power, then the right to wage war follows of itself. When the police fight with a criminal gang and kill some of them, such fighting is not war only because the resistance of the criminals is not strong or prolonged enough to deserve the name of organized force. But suppose that resistance grows stronger. Imagine for example a community in which some persuasive thief denies the immemorial right of private property and convinces a considerable group that no such moral right exists. "You wicked property owners," he says, "should give up what you own, and everything should be shared according to the physical needs of all. You won't do it? Then we will kill you." Just so the Communist known as Stalin began his public life as a bank robber or train robber. Citizens of

the traditional sort usually answer: "What you propose is wicked, and we will see you in Hell before we will permit such detestable doctrine to triumph. We will improve your spiritual state and bring you to repentance by knocking you on the head." Then you have a riot, and if the rioters are not put down by the police and the other supporters of the existing law, if on the contrary the fighting persists and spreads, then you have a civil war. Much the same thing happens in foreign war. Suppose two adjoining communities, one richer than the other. Those of the poorer group say to their wealthier neighbors: "You have more horses, or cattle, or women, or what-not, than you really need. Since you refuse to share them amiably with us, we will come and take some." From whatever side we approach the matter, we always come out at the same point; the right of the community to use force in protecting itself against a few enemies in the shape of common criminals must carry with it the still more necessary right of forcible protection against many enemies. In other words, the right of policing must include the right to make war. Since all communities find they must use force, war in one form or another must be an integral part of every social order.

One would have to apologize for emphasizing such a truism were it not so often denied. Not a few of our contemporaries have even fallen into the intellectual degradation of talking about "outlawing" war—as if any war could exist unless law had previously broken down.

* * * *

If all wars must be the terrific affairs with which we are to-day all too familiar, then to admit war to be necessary would be a counsel of despair. Happily this is not true: war is not always the same. Throughout history it has passed through very different phases, and will doubtless pass through many more.

Oddly enough, our time which in most matters emphasizes changing rather than unchanging things, usually talks of war as if it changed little except for new weapons. On the contrary, it also changes in obedience to religious, moral and social changes which are perpetually soothing old quarrels or raising

new ones. The interaction between these and the technical military changes determines each new phase of conflict. Thus nothing is more characteristic of any society than its military system and its armed struggles. There you find reflected its industrial technique, power of organization, and moral driving forces, fused into a single effort.

We may compare the historical phases of war to the colors of the spectrum ranging from infra red to ultra violet. Let the infra red stand for the ultimate in ferocity—wars of mutual massacre—and the ultra violet for conflicts hardly distinguishable from police work. In practice neither extreme is ever reached: we know of no large or prolonged wars of extermination, and of no societies so peaceful as to need no organized force except for normal policing. Massacres of the defeated side are exceptional and have never characterized any considerable war; even the Mongols, or the armies of the Thirty Years War, or Cromwell in Ireland, did not kill all the men, women, and children of whole provinces. Nor have the most tranquil societies ever been wholly at peace; even the Roman Empire maintained an army that was more than a mere constabulary. Even modern England, where the police habitually carry no deadly weapons, has always had its armed forces. Moreover, England is not a complete or isolated society to the extent that the Roman Empire was, on the contrary, she must reckon with other armed powers.

Nevertheless, the two extremes of the military spectrum, although never reached, have often been approached, and the historical phases of war are marked by their approach toward one or the other. Great and ferocious wars which we may call "unlimited," have characterized some, while others have been only lesser, "limited" conflicts. As I have said elsewhere, these terms are only shorthand. Since no war has never been ideally unlimited, those which we call "unlimited" are really imperfectly limited, and those which we call "limited" might more accurately be called strictly limited. But for convenience the shorter expressions may serve.

The two terms have sometimes been used with reference to the political object of the fighting. Thus, wars of which the political object is not the total overthrow of the hostile group

have been called "limited" because they are waged for a limited political objective. The United States in 1898 did not need to invade and conquer Spain itself, nor did the Japanese in 1905 need to invade Russia; in both cases the defeated side could be shown that it was not worth while going on without pushing matters to an extremity.

Conversely, wars which aim at the total overthrow of the hostile power have been called "unlimited" because in that sense their political objective was unlimited. For our purpose, however, unlimited wars are those of which the combined scale, intensity, and duration inflict so much hardship on so many people as to strain the social order, whereas limited wars do not strain it.

In general there is throughout history a cycle between periods of imperfectly and strictly limited war. The thing may be compared to the rise and fall of waves or tides. Within the twenty five centuries for which we have continuous and legible written records of men of European stock there are seven such periods. These records begin with the Greeks. At their outset we find the Greek world comparatively peaceful and without memory of the killing or wounding in war of any earlier culture—although that may have happened. During the lifetime within which our earliest surviving histories were written there began a period of four hundred years during which European civilization was never long free of great wars. This was followed by eight centuries of the strict Imperial Roman limitation of war, and this in turn not by a phase of imperfectly limited war but by another strict limitation, the Medieval, lasting for seven centuries and bringing us down to the beginning of modern times about the year 1500. The modern world has seen three phases each of about a century and a half: the imperfectly limited Wars of Religion, the strict Eighteenth Century limitation, and our own phase of democratic armed hordes and mass massacres—which seem not yet ended.

The replacement of the Imperial Roman by the Medieval limitation shows the whole process to be no mere mechanical cycle but an organic thing under the control of human intelligence and will. When the Imperial scheme had suffered its

long and gradual decline ending in the disasters of the Dark Ages, a period of imperfectly limited war might well have followed. The same organic nature is shown by the great variations in the length of the different phases. Nevertheless, with the important and happy exception of the Middle Ages, a flood tide of war has sooner or later followed every ebb and has in turn ebbed away.

The human motives behind this ebb and flow of the tide of blood are perfectly clear. They have been permanent since the beginning of history and probably ever since true men first lived. Indeed if we will disregard "evolutionary" guesswork and stick to what we know, we will find unchanging characteristics distinguishing every living species. Just as no race of three eyed or one legged men has ever been known, so no people has ever been without envy, jealousy, and hatred, or—on the other hand—wholly without intelligence and goodwill.

The causes of war are always spiritual or moral. At this point it may make the matter clearer to return for a moment to crime and punishment. The thief by his action asserts that he has at least as good a right to what he steals as its former possessor; a murder in itself is a claim that the victim's death was either desirable or necessary, or both. On the other hand, the argument from crime and criminals may seem to imply total wickedness on one side in every conflict and corresponding virtue on the other side, because society cannot always stop to argue with criminals over the possible purity of their motives. It is concerned with its own peace and safety, and must content itself with approximate rather than ultimate moral values. But in war matters are not always so simple. Not often is the world presented with so clear and striking a case of wrong doing as in Prussianized Germany's invasion of Belgium in 1914; a treaty guaranteeing the independence and neutrality of a little state and that treaty deliberately violated by one of its signers. In most instances right and wrong are at least somewhat mingled. Even were men and women exempt from greed, envy and hatred, they would still quarrel about spiritual things, about what is right. The more each party believes themselves justified, the more they will be shocked at the abominable doctrines and still more abominable doings

of those who believe the opposite. If you think religious and ethical differences are today unimportant, you need only propose in any city of the United States that public money be appropriated for the support of Roman Catholic parochial schools!

Unfortunately for those who would oversimplify the complex realities of life, the rights and wrongs of human quarrels are not always clear. What in effect did the White Men say to the North American Indians? It was as if they said: "You are a handful of degraded savages. We with our superior religion and culture can show you a better way of life. With our greater industry and command over Nature we can make this country support a hundred or a thousand times as many souls as there are among your half starved bands of hunters. Moreover, you are disgusting people who burn prisoners alive for fun, whereas we almost never burn anyone alive, and then only for the most terrible crimes such as witchcraft or negro rape upon a white woman. Out of our way or we will show you what is what and who is who!" Probably no White Man now living would take seriously the idea of giving the country back to the Indians. And yet when the Germans of 1914 made a similar plea of superior culture in justification for attacking their neighbors, few Americans agreed with them.

Agreement by persuasion is the test. When the members of a group substantially agree as to what is right and just, in other words when the group possesses a high degree of moral unity, then there is a low potential of conflict. Conversely disagreement over important matters, that is moral disunity, make for a high potential of conflict. Any fundamental disagreement must be settled in one way or another: either by a decision through the crushing of one party to the dispute, or by a compromise in which both sides agree that the dispute is not important enough to warrant further sacrifices.

Peoples tire of long and great wars. They become frightened because they begin to see all too clearly what will happen to them if the conflict continues. Most of all they become disgusted. Sooner or later therefore some settlement is reached.

So far we have been considering war as the product of society, the child of the morals, intellect, and economy of the previous peace. Although true, this is not the whole truth.

War also reacts upon society, especially with regard to the important factor of duration. Potential war is not actual war. As we have seen, imperfectly limited conflicts are those of which the combined scale, intensity, and duration are enough to strain the social order. Now scale and intensity are closely connected with the potential of strife. A community furiously enraged with another of about equal strength, or one which fears the greatest evils from defeat, will raise large forces which will fight fiercely. But the duration of the struggle is quite another matter, a factor largely independent of the potential at which it began. When fighting has commenced, the length of time necessary for a decision depends upon the accident of leadership and the innumerable chances of war. Napoleon might have been killed at Toulon in his first fight. In 1914 the Germans might have crushed the French army at the Marne. Such matters have nothing to do with broad social considerations.

Clearly, the duration of a war affects society enormously. Exhaustion comes—quickly or slowly—to the extent that each opposing group throws its whole resources into the struggle. In the graver cases, when general popular passions are roused, a delirium of fear and hatred swamps the reason and must run its course like a fever. While the fit is on, the combative emotions take charge like runaway horses. At the worst, the peace may find the victor suffering from a disaster only less than that which he has inflicted upon the vanquished. Spiritual fatigue may follow from material exhaustion; and since the rational object of war is a better peace, a conflict which benefits no one either materially or spiritually is rightly called an irrational war.

Stable and healthy societies survive such strains, unhealthy and unstable ones may collapse.

How long any given society will endure armed strain without collapsing, no one can say in advance. We may liken the process to prolonged fatigue in an individual which takes from him the power to resist disease germs long latent in his body.

Although today we think we know something of general social fatigue resulting from armed strain, yet in the past such strain has been carried much further than anything with which we are familiar. It has reached its height in blockaded places; the English poet Masefield says of a besieged city just before its surrender: "There were no people. Only some deathsheds dying of plague and a few madmen on the walls." The extreme limit of military strain is obviously famine followed by plague; which limit has, over large areas, been far more closely approached than in 1918. One need only glance, for instance, at the horrible Thirty Years War—plague and famine killing perhaps a third, perhaps three quarters of the German-speaking peoples, to an accompaniment of massacres and cannibalism.

* * * *

Midway between the potential of strife which is a product of society and the duration of any particular struggle which is affected by a thousand independent factors, stand military institutions. These are at once products of society and strong forces acting upon it.

The history of military institutions has been little studied. Monteilhet, the author of "*Les Institutions Militaires De La France*," writes: "The noise of battles fills history . . . but no light shines upon the ways in which people become soldiers."

Insofar as the withdrawal of men from peaceful occupations to armed service strains the food supply and other resources of the community, the matter is simple enough: in peace-time a group which foresees strong resistance to its policies will prepare a considerable armed effort, while one which foresees no such resistance will content itself with smaller preparations. Complications begin, however, when one considers the conditions of armed service. An armed force may consist of long service professionals who have enlisted while young and expect to go on serving throughout their active life. Again it may be composed of men wholly without training, a sheriff's posse or a levy of hitherto unorganized militia, gathered to meet some sudden emergency. Between these extremes many variations are possible. In campaigns of any length the long service professional army or navy will need replacements, for many causes

besides hostile action make the wastage of active service high. Again, the professionals may be serving only for short terms, so that they still to some extent think of themselves as civilians. Further still, they may be organized only as a nucleus meant to be diluted in war time by reservists or recruits. At the other end of the scale there are similar shadings. Few if any armed bodies have ever been composed from top to bottom of officers and men wholly without experience of weapons and fighting. Most have had at least a little systematic training like the annual muster day of early Nineteenth Century American militia. Many organized bodies of temporary men-at-arms have had much more than this, for instance the French conscripts who served three year terms shortly before 1914. Here the two extremes approach each other; a conscript body of some training with professional officers and non-coms has much in common with a professional force meant to be diluted with reserves to bring it to war strength.

Nevertheless there is a real distinction between professional and temporary fighting men. The professionals form a guild or corporation of their own, distinct from the other citizens. They fight from disciplined habit. Their esprit de corps is not unlike a strongly developed school or college spirit. Their sense of the honor of arms has much in common with that of a clergyman who will not disgrace his cloth or a good workman who would be ashamed to do a bad job. Thus they are ordinarily obedient instruments of the governments which pay them. The French Foreign Legion or the United States Marines have fought in many quarrels about the merits of which their individual members knew and cared little. They need no violent emotion to make them fight. It has been well said that the grenadiers of Maria Theresa did not have to be told that Frederick the Great was a Sodomite, or those of Frederick that Maria Theresa ate babies.

Temporary troops on the contrary can have no comparable professional spirit. Their opinions are in general those of the community from which they come. A few exceptional individuals will take to war like ducks to water, campaigning and fighting for the fun of it, but most will willingly face hardship

and danger only when filled with emotion. You must tell them that they are fighting for God and righteousness against enemies who are the spawn of Satan.

Accordingly the difference in spirit between wars fought by professionals and those fought by amateurs is—to put it mildly—considerable. In his *Essays* Sir Francis Bacon, writing “Unity In Religion” in connection with popular violence of which religion was in his day the chief cause, says: “. . . as the temporal sword is to be drawn with great circumspection in cases of religion, so it is a thing monstrous to put it in the hands of the common people; let that be left to the Anabaptists and other furies.”

Further, professional troops represent military quality, since in peace they can give their whole time to training. At the same time their numbers are limited by the expense of keeping them always under arms. Conversely, temporary soldiers cannot achieve the same standard of military quality because they do not give their lives to war and the preparation for war, but they can achieve quantity, i.e. numbers, because the community does not have to support them between wars.

Preparation for very great armed efforts has always tried to combine the advantages of military quantity and quality as far as that could be achieved. Obviously, however, there is a moral limit to the proportion which any government can take from the food supply and other resources of its citizens. In practice all governments which have approached that limit have in the organization of their armies preferred either military quality or quantity. That is, they have on the whole tried to make themselves formidable either by increasing the effectiveness of their individual soldiers through high training at some sacrifice of numbers, or by increasing their available numbers at some sacrifice of training.

On a planet of which most of the surface is covered by water, no one can treat war broadly without some consideration of navies, and at sea the question of military quantity versus quality must be somewhat differently stated. However, since man is a land animal, we may for the moment confine ourselves to armed forces intended to act overland.

A human group intent upon military quantity, i. e. numbers,

puts into the field every available man. Availability is of course limited by age, health, and absolutely necessary civilian labor, and usually by certain exceptions considered morally necessary. Nevertheless the ideal limit of military quantity—every man a soldier—has been closely approached in the mass armies which have been the chief instrument of recent land warfare.

The same ideal—every man a warrior—is that of warlike, savage tribes. For instance in most of the present United States the first white immigrants found Indians whose men called themselves warriors or braves and occupied themselves wholly with war and with hunting which resembled their sort of war. Such agriculture as they had was the work of women. On a slightly higher cultural level, not a few Europeans and Asiatic barbarians organized themselves in much the same fashion, and from time to time the civilizations of the Old World have been attacked by vast barbaric armies called hordes, the essence of a horde being the combination of barbarism with great numbers.

Past civilizations however tended to rid themselves of the armed horde. As the division of labor affected military institutions, the proportion of men who had little or nothing to do with war increased. Up to about a century and a half ago the emancipation of civilized states from the every-man-a-soldier idea might be considered a mark or index of their civilization.

* * * *

During the last century and a half civilization has recreated the armed horde. Previously a rarity, it has become the accepted instrument of any great military effort. It has not however come alone. Exactly a hundred and fifty years ago in 1789—shortly after the United States had sought to protect themselves against democracy by their Federal Constitution—the French Revolution began. From that time to our own day democratic ideas have come to dominate politics just as the mass army has dominated war. It is the thesis of this book that the two are inseparably connected both with each other and with a third thing, barbarism.

* * * *

This idea is by no means original with the present writer. To give at this point only one of many instances, as early as 1891 the distinguished French scholar Taine wrote in his "*Origines De La France Contemporaine*":

Universal conscript service "...has propagated itself like a contagion...; it has mastered all continental Europe and reigns there with its natural companion which always precedes or follows it, with its twin brother universal suffrage, each...dragging after it the other..., both blind and formidable commanders or regulators of the...future. One puts in the hand of each adult a ballot, the other puts on the back of each a soldier's knapsack: with what promises of massacre and bankruptcy for the Twentieth Century, with what exasperation of international ill will and distrust, with what loss of wholesome effort, by what a perversion of productive discoveries, accompanied by what an improvement in the means of destruction, by what recoil toward the inferior and unhealthy forms of the old combative societies, by what a backward step toward egoistic and brutal instincts, toward the sentiments, manners and morality of ancient cities and barbaric tribes, we know all too well. To understand the matter it is enough to compare the former and the present military systems of Europe. Formerly there were few soldiers, some hundreds of thousands. Today in Europe there are eighteen million actual or potential soldiers, including all adults, even the married men and the fathers of families, either actually called up or subject to call throughout twenty or twenty five years of their lives, in short as long as they are physically fit. Formerly no lives were legally confiscated in order to shoulder the burden of military service in France. Lives were only bought by contract, and lives appropriate for such a task and otherwise idle or harmful, about a hundred and fifty thousand lives of mediocre value, which the state could expend with less regret than others, since to sacrifice them did no great harm either to society or to civilization. Today for the same service in France four million lives are seized by authority, and if they seek to escape they are seized by force. All...from their twentieth year are put to the same manual and murderous profession, including those least suited for this task and those best adapted to other employment, including...

the most inventive and the most productive, the most delicate and the most cultivated, including those distinguished by superior talent of which the social value is almost infinite, and of which the compulsory miscarriage or the early end is a calamity for the human species."

"Such is the result of the new regime; military obligations are balanced and as it were extorted by political rights. The citizen of today may put both on the scales. Let him place in one scale his sovereign prerogative . . . of handing in every four years one out of every ten thousand votes for the election of one out of six hundred and fifty Deputies. Let him place in the other scale his actual obligation; three, four or five years of barracks and passive obedience, later twenty eight and still later thirteen days during which he is recalled to the colors, and then twenty years of anxious waiting during every rumor of war for the order which will put a rifle in his hand to kill or be killed. Probably he will end by noting that the two weights are not equal. . . ."

The truths of which Taine was the unheeded Cassandra have since 1918 been written in letters of fire across the world. Why then were they not sooner recognized?

In peace and during short wars the mass armies of civilized states are not wholly barbaric. Their discipline is enforced by professional officers and non-coms, and like professional forces they are more or less obedient to their governments.


A long war, however, brings the barbaric essence of the horde closer to the surface. Then the mass army becomes a swarm of locusts devouring every green thing, or a maelstrom which sucks everything into its whirlpool. The imperious need for food, weapons and fighting spirit threatens material and moral values alike. Accumulated capital disappears like paper in a fire. Truth and justice are deliberately murdered by organized lying known as propaganda. Like Indian squaws, women find their labor more and more in demand for the work which the barbarian will not and the civilized man now cannot do. The armies become less disciplined and more emotional as their professionals are killed, while draft after draft, imperfectly trained, is rushed in to fill the gaps in the ranks. Generalship may improve with practice and the weeding out of unfit com-

manders, but—as fatigue sets in—the immediate control of the men by the lower officer ranks weakens. Not only the armies but the entire population who must work and suffer to support the fighting men are the targets of incessant appeals for loyalty, effort and hatred of the enemy. It is impossible to stop the war by negotiation, for the atmosphere in which negotiation can take place has been poisoned. Proposals for a compromise are howled down as treason in the interest of fiendish foes; and in a sense they are treason, for they may weaken the general will to fight on. Moreover the side which collapses first may suffer even more than its almost equally exhausted opponent. At last the collapse approaches. The reaction of feeling sets in. Having suffered so much, so endlessly and—as it now appears—so uselessly, the peoples refuse to go on. Under the shock of some disappointment the overwrought nerves of one side give way. Words like loyalty and duty have been repeated to them so often that they no longer have meaning. They are like speeches made to a man who is falling into a drunken sleep. The last energies of the community are turned against the government which has made them suffer so much. There is a revolution which may mean a period of anarchy. If during the previous peace the social order was already threatened, it may now be destroyed by a general massacre of the upper classes.

In any case, given the mass army and a long war, no halting place short of revolution can be found. The armed horde, brought back to earth by the French Revolution, must invariably return to its origins.

Nor do the evils of prolonged mass warfare end with the stoppage of the actual fighting. When the victors are nearly as much exhausted as the vanquished, then the legitimate object of war, which is a better peace, becomes almost impossible. Any genuine peace must mean either the political destruction of the conquered or their reconciliation to the conditions imposed. Victors who are exhausted and also filled with hatred are incapable alike of the further effort necessary to destroy their victims and of the generosity necessary to reconcile them. Consequently the enemy, angered and humiliated but not destroyed, may well seize the first opportunity for revenge.

The armed horde has been slow in producing its natural fruit only because the peace which in 1815 followed the final defeat of Revolutionary-Napoleonic France was not of the sort just described, and because—except for the limited struggle in the Crimea—there was no general and prolonged war between great powers from 1815 to 1914.



Chapter II

Pre-Democratic War

"Military institutions should be framed with a view to the circumstances of peace."—ARISTOTLE.

THE MODERN ARMED horde or mass army, the typical military instrument of our time, was created by the democrats of the French Revolution. In ancient and medieval Europe it had been rare, to early modern times it had been unknown.

This second truth is both so important and so unfamiliar as to need substantiation. A short survey of earlier military institutions will, by contrast, help to show the unity of our own phase. It will also remind the reader that our age suffers not from "war" in the abstract but from a peculiar form of war which has held the stage for less than a century and a half, and can be ended whenever we choose to return to the same wisdom often—although not always—found among our ancestors.

In ancient times military numbers were universally limited by the institution of slavery. There could be no question of putting all the able-bodied men of any civilized or semi-civilized community under arms, because a certain number of those able-bodied men would always be slaves who were not thought worthy to be soldiers. This does not mean that slavery created general discontent among the slaves. On the contrary, there are instances of hard-pressed communities arming some of their slaves without fear that these might go over to the enemy, and there is only one known ancient instance of a considerable slave revolt. What the proportion of slaves to free citizens was we do not know; probably it varied from time to time and place to place. Indeed all our knowledge of the numbers of

ancient populations is fragmentary, and most of it is uncertain. At all events, slavery somewhat narrowed the recruiting field of every ancient community.

Ancient military numbers were further limited by the high cost of equipment. At the beginnings of European history we find the northern shores of the Mediterranean almost entirely covered by city-states, most of them Greek speaking. Their military instruments were civic militias in which all free citizens might be compelled to serve, but when mobilized the citizen-soldiers furnished their own equipment. The typical military unit was the heavy-armed foot-soldier whom the Greeks called a hoplite, carrying besides his sword and spear a shield and a metal helmet, a cuirass, and shin-guards called greaves. Poorer freemen, unable to afford armor, served as light-armed troops, but before the rise of professional armies such troops were of little importance; often so little that their presence on the battlefield—if indeed they were present—is not even mentioned. In practice therefore not only the slaves but also many if not most of the poorer citizens were thought not worth mobilizing.

The numbers of the armies put into the field at any one time by the Greek city-states were further limited by the inability of those states to combine in larger political units. A number of cities would sometimes ally themselves temporarily, and toward the end of their independent existence some of them formed permanent leagues which were really federated states, but no war—not even the resistance to Xerxes—ever united a third of the Greek world.

In the Sixth Century B. C. the Greeks enter historic record without memory of the killing or wounding of any earlier culture in war. Their oldest literature, the poems of Homer, tell of a great war against Troy, and archaeologists have found an early Aegean culture, called Minoan and centering in Crete, which may have been violently destroyed. When we first observe the Greeks, however, we find them comparatively peaceful, fighting among themselves but not to any alarming extent, and not subject to severe attacks from without. They were already highly cultured, capable of smelting metals and working in stone, and full of artistic, intellectual and political life. More-

over in this early period they were rapidly expanding, both by the founding of colonies far and wide on the shores of the Mediterranean and its neighboring seas and by increase in numbers and wealth at home. Their unity, however, was vague. Such as it was, it depended upon similarity of language, belief in the same Gods, and the common celebration of certain religious and athletic festivals. On the other hand, the political unit was the city-state, and in practice the pagan sanctities were local rather than universally Greek. An Athenian would expect Athena to oppose all the enemies of Athens as a matter of course.

The earliest known Greek wars were neighborhood squabbles between city and city, usually fought to harvest or destroy an opponent's scanty crops. For nearby campaigns of a few weeks or even days the civic militias were appropriate enough. Although sometimes one of the few patches of cultivable land would change hands, yet even in the rare cases of the conquest of one city by another no great political results could be accomplished because the Greek cities could not assimilate or absorb. They were unwilling to naturalize "foreigners" even when allied, so that the occasional subjugation of a neighbor gave them not more citizens but only uncertain subjects who needed continual watching.

The Greeks were in contact with Oriental powers much larger than any city-state, some of which powers, notably the Persian Empire, were accustomed to mobilize vast numbers. Before the Persians the Assyrians may already have done so. The horde with which the Persian Emperor Xerxes invaded Greece in 480 B. C. was enormous. Excluding the crews of the fleet and the numerous camp followers, Herodotus puts the fighting men of the land forces alone at a million seven hundred thousand. Nevertheless the imperfectly united Greek world was able to defeat Xerxes. In fact Greeks usually defeated greatly superior numbers of Orientals. How much this was due to better armament, how much to individually superior strength and spirit, and how much to better discipline we cannot tell. At any rate the Greek military superiority was there.

Having repulsed Persia, Greece next fell a prey to a series of civil wars which lasted until its independence was destroyed.

At this distance in time the material effects of the Greek Civil Wars are impossible to gauge. Population is said to have declined, but this was due to widespread sexual perversion, abortion, and infanticide as well as to war. The spiritual results of the incessant fighting are plain enough in the literature of the time. The Persian wars were short, the worst of them against Xerxes, lasted for only two campaigning seasons, and the victory brought with it a magnificent, buoyant hopefulness. Under the long, grinding civil struggles this vanished never to return. Interestingly enough in view of our present plight, the first and worst of these, the Peloponnesian War between coalitions led by Athens and Sparta, which lasted for nearly thirty years, began not long after the establishment of radical democracy in Athens. Even in an ancient slave-holding society, government by mob-oratory, rousing the appetites and passions of the poorer citizens, led naturally to aggressive, imperialistic war waged to an accompaniment of the vilest crimes. When the Athenians wantonly threatened the little neutral island of Melos, afterwards immortalized by the finding of the famous statue of Venus-Aphrodite now in the Louvre, the Melians justly claimed to have the Gods on their side in their righteous resistance against unprovoked aggression. To which the Athenian democrats cynically answered that the Gods themselves always maintain their dominion wherever they are the stronger. They then killed all the men of Melos, sold the women and children into slavery, and planted the island with Athenian colonists. Throughout the war the peace party in Athens were the aristocrats. Henceforward class wars were constantly breaking out here and there in Greece.

When the long Peloponnesian struggle with its agonies and its wickedness had ended in humiliating defeat, Athens, the artistic and intellectual capital of Greece, never regained her political position, nor could any other city long achieve dominance. The recurrent wars settled nothing until Macedonia, a half-barbarous power on the fringe of the Greek culture but strong through monarchy and through technical military excellence, became the chief power in Greece. Under the inspired leadership of Alexander Macedonian armies overran the vast Persian Empire, overthrowing the Persian hordes in a few

dazzling campaigns, founding Greek Cities from the Mediterranean to Central Asia, and the borders of India. But even then, with the area of Greek culture multiplied a hundred fold and its wealth enormously increased, neither the old comparative peacefulness nor the old buoyant spirit returned. Physical science did indeed advance, but today we know all too well how little that can mean to human happiness. Greek art and thought, although a revelation to the Orientals, were no longer what they had been. Art remained splendid but lost something of its purity and dignity in a certain florid restlessness. Philosophy became little more than an uncertain refuge from despair—as the great wars of Greek against Greek continued.

Meanwhile there was an important change in the matter of recruitment. Mercenaries replaced citizen soldiers. Civic militias are not suited to long and distant campaigns. Even in a slave-holding society there is an economic loss when free citizens are taken from their ordinary occupations, they and their families resent the process. From the beginning some Greeks had been willing to hire themselves out as fighters, and as their civil wars continued the proportion of such men had increased. A long lifetime before Alexander, Xenophon and ten thousand Greek mercenaries had written a brilliant page of military history which is still a common task for schoolboys. Deeply invading Persia in the service of a claimant to the Persian throne, they had won their battle only to lose their claimant who was killed. As if this were not enough, their generals were treacherously murdered. Notwithstanding such misfortunes, they marched and fought their way back more than a thousand miles to safety. After Alexander's time the tendency to rely on mercenaries so increased that they became more important than the citizen soldiers. As the Greek culture became richer, the average freeman was less inclined to face the hardships of campaigning.

The next masters of the world were the Romans. Rome began as a City State of the sort familiar both to the Greek and the non-Greek civilization of the Mediterranean, but soon showed unique qualities. She had a higher civic spirit than any other ancient people, higher perhaps than that of any people known to history. In the best sense of a much abused

word, her temper was severely practical. Even when her heroism was highest she never lost sight of reality. She had powers of attraction and absorption such as no other City State possessed. Her justice and her whole way of life commended itself to outsiders. They were glad and proud to be her allies, still more to be her citizens, and she on her side was not exclusive. In the modern world only France has something of the Roman gift for drawing alien peoples to her. Almost always her policy was firm and surefooted, never weakening and yet never attempting the impossible.

These qualities were supported by the most effective military system known to antiquity. For centuries the Roman farmer-soldiers were organized in a universal service conscript militia like those of the Greeks, like them depending chiefly upon its armored heavy infantry carrying spears and standing in a single heavy line, the phalanx. But from an early time they originated a better armament and formation. For the spear they substituted a heavy throwing javelin, the pilum, and for close fighting they used swords, never slashing with these but always thrusting—like good boxers who use straight punches instead of the more easily parried swinging blows. They stood in a new order of battle in which the heavy mass of the phalanx was broken up into three lines which stood at distances sufficient to keep the supports clear of the actual fighting while permitting rapid reinforcement. In each line the units when in close order were formed with intervals which permitted freedom of manoeuvre. The whole arrangement was far more flexible, elastic, and adaptable to different sorts of ground than the phalanx.

Thus ordered, equipped, and backed by the wise Roman policy and power of assimilation, the Roman armies mastered first the Western then the Eastern half of the Mediterranean, pushing the frontiers of civilization north to the Rhine and the Danube.

The last century of this process was a time in which fearful Civil Wars were added to wars of conquest. Many of the disruptive forces within the Roman State are active today. If the struggle between Rome and the Italian cities allied with her but as yet without full civic rights has no Twentieth Century

counterpart, most of the quarrels are all too familiar. We see a society suddenly and enormously enriched, but one in which law and custom had permitted too much of the new wealth to be concentrated in a few vast fortunes while masses of free citizens had become impoverished proletarians. Especially we see the ruin of the landowning farmers who had supplied so much of the Roman vigor of Roman society. Drifting into the metropolis they became the dupes of every demagogue. The breakdown of self government went hand in hand with a loosening of all traditional, religious and social restraints. The resulting maelstrom of unchecked appetites whirled the Roman people from one massacre to another until not even the oldest could remember a time of political stability or peace.

Nevertheless the Roman State was not dissolved. Its newly laid cement stood the strain. No party chief wished to destroy its unity but only to control that unity. Nor did any conquered people, no matter how recent their subjugation, seek to break away. About thirty years before Our Lord's birth all was set in order by the last of the great leaders of faction, Augustus, who made himself the first Roman Emperor.

The society over which Augustus finally achieved power was heartily sick of blood. If we will allow for the classic cult of artistic restraint and dignity, the classic dislike for anything like hysteria in literature, we shall find in Horace and Virgil a hatred of mutual massacre at least as deep as that of our own male and female sob-sisters. Augustus had only to take logical and rational measures to insure the fulfillment of the universal desire for peace.

All periods of disorder increase the importance of force. In the Roman chaos the army and its high command had risen to mastery. From a conscript militia the troops had become professional. Always and everywhere, long and distant campaigns demand professional soldiers; militiamen are not suited to them. We have seen the same process approaching its logical conclusion in the Greek world. In Rome that conclusion had been reached early in the horrible century of civil strife. With the weakening of republican institutions, a general and his army could do much what they liked. Like the new millionaires, the soldiers thought more of loot and bonuses than of public spirit.

Augustus systematized the professional army and cut its numbers nearly in half. Most important of all, he set up a new magistracy, having himself named by the Senate for life as Commander-in-Chief, "Imperator," which later became our word Emperor.

On the civilian side he maintained every traditional form and did his utmost to revive traditional manners and virtues. The old pagan religion had long ceased to influence conduct, but now a new and powerful religious custom was established: the Emperor was called a god, and all must sacrifice by burning incense before his statues. Indeed if we believe order to be heaven's first law, then his peace-giving mission really had in it something divine.

The military problem was easy. In practice Rome now governed the entire Mediterranean area. Only along a single short sector between the Armenian mountains and the Arabian desert was the Empire confronted by another civilized power, the Parthian and later the Persian state. Elsewhere were mere forest or desert barbarians, easily dealt with by small numbers of regularly organized and disciplined troops. Nor was internal war much to be feared, for no province except tiny Judea burned with strong local feeling comparable either to the old City-State patriotism or to modern nationalisms. Consequently the mass of civilized men could be completely divorced from arms, all military work being done by a tiny professional force of not much more than three hundred thousand, a mere constabulary.

The Augustan military system long worked well. At the beginning of the period, during Augustus' own lifetime, the weariness of war characteristic of his generation prevented the establishment of the best and shortest military frontier in the Germanies, the line of the Elbe. After a single bad but by no means irreparable check, the permanent boundary was fixed on the Rhine. Just so the fatigued Allies of 1918 shrank from what would then have been the easy task of repressing Communism in Russia.

In spite of this error of judgment, the Roman armies successfully held their frontiers for nearly seven centuries. The ancient society which those armies protected grew old and

weakened with time. Indeed the long continued disarmament of the mass of free citizens may have helped to cause the decline; perhaps men of European stock lose their stamina if too long cut off from soldiership. With the Third and Fourth Centuries the barbarian pressure from the north became somewhat greater so that the numbers of the Roman forces had to be increased. In the Fourth Century those numbers certainly exceeded half a million and may have reached three quarters of a million. In the Fifth Century men of barbarian descent, generals of Auxiliary units in the Roman service, took over local government in the west as deputies of the Emperor, and achieved a measure of independence from him. Outer barbarians overran narrow strips along the south and east coasts of Britain and also along the upper Danube. But with these trivial British and Danubian exceptions, when Mohammed died in 632 no other permanent lodgements within the Roman borders had been made by invaders from outside. Every other attack, even when made by huge hordes like those of Attila and Radagaisius, had been beaten off. That of Radagaisius who had invaded Italy in 406 A. D. had been estimated at two hundred thousand fighting men, that of Attila in 452 at a million.

The great Moslem rush struck against a Roman world enfeebled by usury and divided by fierce religious disputes, a world in which the mass of free citizens had now been systematically disarmed for twenty generations. Even then the professional Roman armies whose unbroken tradition came down through so many centuries did not entirely fail. Although the fanatical Arabs cut away Syria, Egypt, North Africa, and Spain, yet they were beaten back from Asia Minor in the east and from Gaul in the west.

By this time a religious corporation, calling itself the Catholic—that is the Universal—Church, had become more important to the diminished Roman society than the Emperors themselves. The ideal of a peace-giving Empire died hard. Indeed something of it has re-arisen today in the tragi-comic motley of the League of Nations, which has been a feeble attempt to set up a central political authority. But by the Eighth Century the center of moral unity for our civilization was no longer political but religious. The Empire had become Christendom.

Men felt that the real divisions of mankind were not between this or that province of christian men, whether directly subject to the Emperor or in practice independent of him, but between christian and non-christian. Within the provinces remaining to our culture such a spirit was certain to make for peace.

Christendom, however, was now ill served by the professional army system. West of the Adriatic the problem was now one of local defense against raids. After the repulse of the main Arab armies the Moslem had sought loot rather than conquest. In this he had been joined by heathen Hungarian light horsemen and heathen sea thieves from Scandinavia. These last, the Vikings, were the worst of the three. All hated our religion and our diminished culture. In the decay of public finance and of communications, the remaining professional troops could no longer defend the long disarmed masses against such enemies. Comparatively small numbers of highly mobile bandits would suddenly swoop down, now here now there, with frightful effect. One contemporary says that half the population of Gaul died as a result of their devastations, and even if this estimate was exaggerated, still it shows how grave was the peril.

Under the shock our ancestors found new vigor. A remedy was found by organizing all society for local defense on the militia system known as feudalism. The old universal liability for service, preserved in legal theory through the disarmed centuries, was made real again. All became familiar with weapons; the wealthy class turned soldiers and spent much of their time in warlike exercises. The fortified points known as castles were built everywhere. Nevertheless Europe did not sink into unlimited war; instead a new limitation was established.

We think of the Middle Ages as warlike. Their combative spirit, universal armament and fortification, their military aristocracies, their love of the pomp and splendor of arms, make us imagine Medieval men as always fighting. Nevertheless they limited war by making long and large offensive campaigns difficult, and between Christian men impossible.

On a few occasions their fierce energy boiled over in a great flood of Crusaders pouring out against the infidel. But within

the moral unity of Catholic Europe many devices discouraged great conflicts. Government was not determined by contested elections which, if anything vital is at stake, are potential Civil Wars. It was hereditary, descending peaceably from father to son after a fashion to which, when the fever of our time shall at last subside, we may return. We have seen that all society was organized for local defence on a universal service militia basis. But when one Medieval ruler ordered his feudal vassals to attack the territory of another, their oaths of allegiance bound them to do so for only forty days in the year. After that he had to pay them, which was practically impossible for him to do because custom wisely forbade governments to tax people for an amount larger than just enough to sustain ordinary expenses. To raise extraordinary revenue, a Prince had to get the direct consent of those whose money he proposed to spend. Such revenue was nothing he could compel; it was a free grant. The intensity and destructiveness of conflict was limited in many ways. Great sums were spent on defensive armor. Between gentlemen—always present on Medieval battlefields in larger proportion than their numerical proportion in the community—the custom of ransom made it pay better to take prisoners than to kill. If you captured an enemy he would buy his liberty very dearly, custom permitting him to lay a special tax on his dependents, while if you killed him his son owed you nothing but hatred.

An article by Sidney Painter in "Speculum," the organ of the American Medieval Academy, for July 1935 gives interesting details concerning ransoms and other customary limitations of Medieval warfare between Christians. "Unless the fortress was of enormous importance, the person of a baron was too valuable to risk during a siege. He preferred the open country and a fast horse. The ransom of a man of rank was a more serious burden to a fief than the loss of a castle."

"The Middle Ages were not given to 'forlorn hopes.' When a constable (in command of a castle) realized that his position was hopeless, it was his duty to notify his master and request relief within a certain time. If the required aid was not forthcoming, he could surrender with perfect propriety. As a rule the besieging army was willing to grant a truce during the time

involved in this process in the hope of being able to secure the stronghold without loss of life. . . . The Medieval warrior was too realistic . . . to start a series of reprisals that might some day involve himself or his own men."

Further, Medieval numbers, especially those available for offensive campaigns, were even more drastically limited by the cost of full armor than the ancient City-State militias had been by the cost of hoplite equipment. In the Middle Ages a complete suit of armor cost the year's rent of a small farm. Moreover its wearer must be mounted. Ill equipped men might be of some use to swell the ranks of armies standing on the defensive near their homes, but for long or distant campaigns no great numbers of such men were considered worth their keep. Consequently armies defending their own districts were usually much larger than invading forces.

All this must not be thought of as a deliberate program like that of Augustus. Most things typical of the Middle Ages were spontaneous adaptations to existing necessities, and their military institutions were no exception. A vital point like the short forty days' service, when it first appears in Charlemagne's laws, seems more like a recognition or regularization of a custom which had grown up, not an innovation.

The Church, besides providing the atmosphere of moral unity—within which restrictions upon war naturally flourished—also directly restricted war by precept. The Truce of God forbade fighting on or near Church property, and all attacks on pilgrims, merchants, women, peasants, cattle and agricultural implements, or on "clerics" i. e. men in Holy Orders. Since the clerical order included in addition to bishops, priests and deacons, also subdeacons, acolytes, exorcists, doorkeepers of church property, lay brothers of religious orders, and university students, this gave no little immunity to a large part of the population. Throughout most of Christendom the Truce prohibited wars between nobles from Wednesday evening to Monday morning in every week, leaving only three days and two nights per week for those private wars which may be compared to our own strikes. Even these three days were ruled out during Lent, Advent, the three great feasts of Our Lady,

the feasts of the Apostle and certain other Saints. No right of conquest was admitted between christian men, so that disputes as to who should govern a given district arose only when two men both claimed hereditary right. Men being what they are, such prohibitions would now and then be broken or hypocritically avoided. Nevertheless the moral feeling of the time made them anything but negligible. Also the Church—by forbidding as usury all interest on loans made for economically unproductive purposes such as fighting—made it difficult for governments to borrow largely and thus evade the wise custom which forbade their taxing away much of their subjects' wealth.

Their gentry at their head, the feudal militias beat back the heathen raiders and saved Christendom. Thus roughly handled, the Scandinavians and Magyars were glad to enter our civilization by accepting baptism. Steadily increasing in strength, our ancestors next sought to extend our culture by the invasion of infidel territory in the Crusades.

These holy wars against misbelievers constitute the main military work of the Middle Ages. The crusading theatres were three: the Holy Land, Spain, and the region southeast of the Baltic. In every case the fighting was done by cosmopolitan and temporary volunteer forces acting in concert with the local christian troops where there were such. In Palestine we finally failed, although the first three Crusades to that country mobilized the largest of Medieval christian armies, hundreds of thousands strong. A careful and recent estimate puts the fighting men with which the First Crusade reached Asia Minor at three hundred thousand. After fierce fighting soiled by frequent massacres, the unhappy quarrel between the Greek and Latin Churches, together with the difficulties of distant overseas communication and the failure to take the key city of Damascus in the first high tide of success, resulted in defeat. In Spain, on the contrary, the persistent effort of nearly eight centuries ended by driving Islam from the peninsula. Here long contact between the opposing sides often brought about a certain consideration and courtesy toward each other. Like Spain, Prussia and Lithuania were completely conquered but by harsher methods: especially in Prussia the pagan aristocrats were killed almost to a man. Chaucer's Knight in the

"Canterbury Tales" has returned from crusading in "Pruce and Lettowe."

By contrast, wars between Medieval Christians were usually both small and short. William the Conqueror was able to raise a volunteer army of some size for the invasion of England not only because he was wealthy as compared with the other Princes of the day, but also because he had a real claim to the English Crown. He put fifty thousand men in line at Hastings. So lacking was the time in what we call national feeling that after that victory a few campaigns against haphazard rebels made him permanent and undisputed master of the island. At Bouvines the victorious King of France mustered about twenty five thousand men. Simon de Montfort won the astonishing battle of Muret with sixteen hundred. At Crecy Edward III had from twenty five to thirty thousand, but at Poitiers the Black Prince commanded less than half as many, and at Agincourt Henry V's troops numbered only fifteen thousand. In each of the foregoing battles except Hastings the losing side were the more numerous. But when we compare the figures just given with the hundreds of thousands of crusaders who marched more than two thousand miles to Palestine, we see the internal wars of Medieval Christendom as mere scuffles.

Like the Imperial Roman limitation of war which had preceded it, after centuries of usefulness the Medieval limitation gradually weakened. The Church, the guardian of the Faith around which moral unity centered, became corrupt, particularly among her higher clergy and in the Papacy itself. Fifteenth Century upper class laymen like Louis XI of France and Henry V of England began to practice an increasing cynicism and cruelty, often combined with a queer, twisted piety. The professional soldier typical of war from Augustus to Charlemagne had never entirely disappeared, and now became more important as governments achieved a greater power to tax. Throughout the Medieval period he had been a cosmopolitan ruffian, irregularly employed by whatever ruler had the money and the will to fight. Too often ready for any violent crime, his greater importance as the instrument of the cynical Princes whose creed was to be set down by Machiavelli, made warfare nastier and more destructive. The Hundred

Years War is a transitional symptom: that two French-speaking families of the same culture, the Valois and the Plantagenets, should fight so interminably showed how the Medieval scheme had weakened; that their long struggle should have done so little lasting harm shows how much of the Medieval limitations still remained. In the period preceding the Reformation, we begin to hear more and more of abominations hitherto unknown between Christian men—massacres of prisoners, sometimes of the country people as well. Such things naturally drew horrified protests; on the eve of the Reformation men like Sir Thomas More, Colet, and Erasmus denounced war as strongly as any twentieth century pacifist. But, like those of our own pacifists, their denunciations went for nothing for want of moral unity which the late-Medieval Church under the corrupt Papacy was no longer able to maintain.

The Reformation destroyed the enfeebled moral unity of Europe, pouring into the witches' caldron—already beginning to seethe with Machiavellian Princes and savage mercenaries—the new and still more terrible element of popular passion. Those who think of twentieth century warfare as a climax of vileness and destruction should read the story of the Wars of Religion when for nearly a century and a half Christians killed each other for the glory of God. The French fought eight civil wars in just over thirty years, the massacres of Cromwell in Ireland recall the behavior of Mongols or Turks, but the superlative of horror was reached in the Thirty Years War. The armies were not enormous; for either side to concentrate forty five thousand men for battle was almost as rare as in the Middle Ages. It was the length and amazing bestiality of the struggle, with its consequent famines and pestilences, that made it so terrible. The destruction exceeded anything in European history; it was long believed that three quarters of the German-speaking peoples died, and although recent research has reduced this to about a third—seven and a half out of twenty one millions—that in itself is unspeakable enough. In a not peculiarly exposed community of twenty villages the loss was eighty five per cent. Cannibalism was frequent; the dead bodies of executed criminals were eaten. Once in Alsace prisoners were actually killed for food. In 1648 at the end of

the nightmare no decision in the religious quarrel had been reached, and clearly another such conflict might bring incalculable consequences.

All this however bred its natural reaction of fatigue, fear, and disgust. Under the shock of such abominations the human mind struggled to right itself like a well ballasted sail boat pressed down by a puff of wind. Goodwill, reason, and the sense of order combined against the horrible form of war which the religious quarrel had nourished. Even the cruel soldiers of the time felt the need of rules. Conan Doyle in "The Magic Door" speaks of a latin book on the laws of war dated 1642—when the Thirty Years War had still six years to run. The creator of Sherlock Holmes is reminded of Walter Scott's character Dugald Dalgetty the professional soldier of fortune in "The Legend of Montrose." "I picture some pedantic Dugald Dalgetty," he writes, "bearing it about under his buff coat, or down in his holster, and turning up the reference for every fresh emergency which occurred. 'Hullo! here's a well!' says he. 'I wonder if I may poison it?' Out comes the book, and he runs a dirty forefinger down the index. '*Ob fas est aquam hostis venere*,' etc. 'Tut, tut it's not allowed. But here are some of the enemy in a barn. What about that?' '*Ob fas est hostem incendio*,' etc. 'Yes; he says we may. Quick, Ambrose, up with the straw and the tinder box.'"

Already, nearly twenty years before, Grotius had published his "De Jure Belli Ac Pacis." No less than five of his chapters recommend moderation: in killing enemies, in despoiling hostile countries, in seizing an enemy's goods, in making conquests, and in taking goods to which the conquered—although they unjustly possess them—have no clear title.

Grotius' quality can hardly be better felt than in the concluding passage of his chapter "On Moderation In Despoiling An Enemy's Country":

"Although it does not fall within the province of this treatise to inquire into the utility of war in all its various branches, but only to regulate its practices by confining them within due and lawful bounds; yet it will not be improper to observe that rules and practices derive much of their merit from the utility, with which they are attended. So that one great quality, to recom-

mend the moderation above alluded to, will be found in its preventing the enemy from being driven to those resources, which men never fail, at last, of finding in despair. It is a just remark made by some Theologians, that all Christian princes and rulers, who wish to be found such in the sight of God as well as that of men, will deem it a duty to interpose their authority to prevent or to suppress all unnecessary violence in the taking of towns: for acts of rigor can never be carried to an extreme without involving great numbers of the innocent in ruin. And practices of that kind, besides being no way conducive to the termination of war, are totally repugnant to every principle of Christianity and justice."

The Dutch scholar's treatment of the laws of war was of course general. He thought of armed strife in its political and social aspects, while Conan Doyle's unknown author was concerned chiefly with its technique. The interesting thing is that the minds of both were working in the same direction. By 1648 all thinking men had come to see imperfectly limited war as ruinous. Not only was it disastrous to society, but also its technical methods were wasteful and inefficient in themselves. From the necessity for finding military methods which would be less destructive, a new, strict limitation was worked out. As in Augustus' time fifty generations before, at the edge of the precipice men drew back.

This last limitation—for it still enjoys the mournful distinction of being the last success in strictly limiting war yet seen upon our planet—is easy to date but hard to name. Beginning in 1648 it lasted until 1793, thus including the age of Louis XIV and almost all of the Eighteenth Century. Although more than a third of its length had gone before 1700, yet since its characteristics were more fully developed after that year, we may call it the Eighteenth Century limitation.

Inasmuch as this period immediately preceded our own unhappy phase of democratic war, and was indeed the high summit from which Christendom fell away into mass massacre, we may study it a little more closely than the earlier phases.

For the statesmen of 1648 the starting point of thought was the stalemate of the Religious Wars. After so much blood and misery, crime and destruction wrought in the name of the high-

est and holiest motives, still the Reformers had failed to capture the Papacy which had equally failed to put down the reformers. Indeed the Papalists had not proved unanimously willing to do so. They had preferred their own governmental and national interests to those of the Faith. As we have seen, over a century before, Machiavelli, codifying the practice of the Despots of Catholic Italy, had treated the aim of government not as obedience to any law of God but as the search for power. Now Richelieu, himself a Cardinal Prince of the Church, had set France above religion. He had saved the German Protestants from the Catholic Emperor of the House of Austria. The old religious bond of union was destroyed.

On the other hand, a society determined to limit war must establish some genuine moral unity. For a thousand years before the end of the Thirty Years War no effective central government like that of Imperial Rome had existed; around the year 1600 Henry IV of France had indeed proposed a European federation but his scheme had been laughed down as a pro-French trick against the Austrian and Spanish Hapsburgs. None the less, much of the strong and stable Medieval social order was still standing: Christendom was like an old apple tree, gone at the heart but still vigorous in the branches. Virtually everywhere government was still hereditary, and everywhere rulers were supported and advised by aristocracies which were the successors of the Medieval upper class. Monarchs, aristocrats, members of the learned professions, indeed all educated men, possessed in common a single culture based upon the classics. Now the classic writers especially praise moderation and decorum. Further, the Medieval cult of Reason did not immediately disappear with the rending of the common Faith which reason had served. Indeed reverence for reason was increased because the science which chiefly impressed the mind of the time was the rigidly logical one of mathematics. Accordingly the men who had seen the Thirty Years War invented a sort of humanist religion. Emphasizing reason, moderation and decorum, they were able to build a new moral unity strong enough to prevent excessive hatreds.

The new humanist religion was supported by no central political authority like the old Roman Empire and had no visible

head like the Papacy. Embodied in no institution, it was based solely upon the unspoken but active consent of educated men together with the passive consent of the masses.

On the political side, including the relation of military policy to policy in general, the best expression of the Eighteenth Century spirit is found in Vattel. In his "Law Of Nations" this Swiss jurist holds the complete independence of sovereign states, together with their moral and legal equality, to be established by natural law. Between independent states the right to wage just and necessary wars is inevitable since sometimes there is no other way of obtaining justice. In principle a government waging a just war has the right to do everything necessary for victory. On the other hand, says Vattel, nothing is gained and much is lost by pushing to its logical conclusion one's belief in one's cause to the extent of considering oneself virtuous and one's enemy wicked. In such a case each Nation "... will arrogate to itself all the rights of war and claim that its enemy has none, that his hostilities are but deeds of robbery, acts in violation of the Law of Nations, and deserving of punishment by all Nations. The decision of the rights at issue will not be advanced thereby, and the contest will become more cruel, more disastrous in its effects, and more difficult of termination. Further still, neutral Nations themselves will be drawn into the dispute and implicated in the quarrel. If an unjust war can give rise to no legal rights, no certain possession can be obtained of any property captured in war until a recognized judge, and there is none such between Nations, shall have passed definitely upon the justice of the war; and such property will always be subject to a claim for recovery, as in the case of goods stolen by robbers."

Consequently enlightened self interest "which desires that the affairs of sovereigns be settled and their quarrels come to a speedy issue" compels us to treat the war as just on both sides. As long as our enemy acts within the ordinary rules of war, we must act as if we thought his conscience to be as clear as our own. The same principle applies to the means by which war is waged. For instance, if you use poison "... your enemy will do the same, and thus without gaining any advantage over him, you will merely have added to the cruelties and horrors of the

war. Necessity alone justifies Nations in going to war; and they should all refrain from, and as a matter of duty oppose, whatever tends to render war more disastrous. Hence it is with good reason, and in accordance with their duty, that civilized Nations have put among the laws of war the rule forbidding the use of poisoned weapons; and in the interest of their common safety all Nations are warranted in repressing and punishing the first attempt to violate that law."

Even "... in the documents which sovereigns publish relative to the war they should refrain from all offensive expressions which would indicate sentiments of hatred, animosity, and bitterness, and are only calculated to excite like sentiments in the hearts of the enemy. A prince should be most dignified both in his written and in his spoken language; he should respect himself in the person of his equals; and if he has the misfortune to have a quarrel with a Nation, shall he embitter the dispute by offensive expressions, and thus take away all hope of a friendly reconciliation? Homer's heroes call each other 'drunkard' and 'Dog'; and they carried war to its utmost limit. Frederic Barbarossa and other Emperors, and the Popes their enemies, behaved no better. Let us be proud of our more gentle and considerate manners, and not look upon a forbearance, which produces such substantial results, as mere idle politeness."

Every warlike act should be directed toward the end of an advantageous and durable peace. Consequently Vattel praises the military customs of his own time: "At the present day war is carried on by regular armies; the people, the peasantry, the towns-folk, take no part in it, and as a rule have nothing to fear from the sword of the enemy. Provided the inhabitants submit to him who is master of the country, and pay the contributions demanded, and refrain from acts of hostility, they live in safety as if they were on friendly terms with the enemy; their property rights are even held sacred; the peasants go freely into the enemy camp to sell their provisions, and they are protected as far as possible from the calamities of war. Such treatment is highly commendable and well worthy of Nations which boast of their civilization; it is even of advantage to the enemy. A general who protects unarmed inhabitants, who keeps his

soldiers under strict discipline, and who protects the country, is enabled to support his army without trouble and is spared many evils and dangers. If he has any reason for distrusting the peasants and the towns-people he has the right to disarm them and to require hostages from them; and those who wish to be spared the calamities of war should submit to the regulations imposed upon them by the enemy."

As de Maistre put it in his "Soireés De St. Petersbourg," looking with horror on the Revolutionary-Napoleonic orgies of loot and destruction which befouled his own day, and with regret upon the mildness of Vattel's Eighteenth Century: in those days "soldier made war on soldier."

Finally, the best guaranty of the observation of a treaty will be moderation in the terms of the treaty itself. Vattel continues: "It hardly ever happens at the present day that a Nation waits until it is reduced to the last extremity before making peace; it may have been defeated in several battles, but it can still defend itself; and it is not without resources so long as it has men and arms. If a Nation finds it prudent to procure, by a disadvantageous treaty, a necessary peace; if it delivers itself from imminent danger, or from complete destruction, by making great sacrifices, whatever it thus saves is an advantage which it owes to the treaty of peace; it freely chooses a loss that is present and certain, but limited in extent, in preference to a disaster, not yet arrived, but very probable, and terrible in character." In other words, the degree of freedom in negotiation and of liberty in action accorded to an enemy defeated but not completely crushed constitutes the moral force of the treaty.

On the contrary, harsh and unjust terms may take all value from a treaty. The conquered sign because they must but they recognize no binding obligation toward the victor. "If an ambitious and unjust conqueror subdues a Nation, and forces it to accept hard, disgraceful, and unendurable terms of peace, necessity may constrain the Nation to submit to them. But this show of peace is not real peace; it is oppression, which the Nation endures so long as it lacks the means to free itself; it is a yoke which men of spirit will throw off upon the first favorable opportunity."

In short, everything was designed to serve the one rational end of war: not merely victory for its own sake, but victory as a means to a better peace. By contrast, as one reads in Vattel of the murderous consequences of assuming an enemy to be wicked, of neutrals being drawn in, of needless cruelties and embittered passions, one might imagine the old Switzer to be consciously prophesying the miseries of our own democratic era from its Revolutionary-Napoleonic beginnings to our own War of 1914-'18 and the sham peace that uneasily followed until 1939.

Like Augustus the men of 1648 found professional armies in use as the chief instruments of war and continued that system but in a new spirit. So that the soldiers might not have to steal food and valuables in order to live—which meant scattering and a consequent loss of control by their officers—they were regularly paid and supplied. Living off the country was exceptional. Food and all sorts of military material was accumulated in magazines and regularly forwarded. To keep the men in hand they were held in strict formations on the march, in camp, and in battle. This was also necessary to prevent their deserting, for like most professional forces, Eighteenth Century armies recruited their rank and file from the cheapest available human material, and adventurous fellows from the lower classes—held in a sort of honorable servitude—were tempted to run away. The Royal Treasury could not draw upon the whole wealth of the nation, for law and custom still limited the proportion of that wealth which could be tapped by taxes, and only the Treasury's resources were available for military purposes.

Eighteenth Century generalship was suited both to the nature of the armies and to the political purpose for which they were used. Long-service regular soldiers are military assets not lightly to be thrown away. They can be given a high tactical training and thus made capable of executing varied manoeuvres with precision. Also they can be firmly disciplined so that they will stand fearful losses without breaking. You do not have to excite them by telling them that their enemies are fiends in human form; they fight because they are told, and their professional pride has in it something of the spirit of a

good craftsman. But they must always be few, since no state will permanently withdraw a large part of its citizens from peaceful pursuits. Nor can they be easily replaced if lost, for their recruiting system and the habit of the community will be adjusted to providing only the few replacements ordinarily needed by a small long-service force. Even after their recruits are found, those recruits must be long and carefully trained before they can be used without deteriorating the high military quality of their units. Accordingly a commander of professional troops must always try to get his results without suffering heavy losses. Ordinarily he must act with caution. All this was as old as Vegetius, the Fourth Century author of "*De Re Militari*," and the professional armies of ancient Rome.

Even an ambitious man and a lover of battle like Frederick the Great seldom put all his available forces into a fight, usually preferring to keep something in hand because he knew he would have to fight again next year. Too weak to crush the powers opposed to him, his chance of final victory lay in convincing them that crushing him would be too costly to be worthwhile. Consequently his normal objective in battle was limited, and unlike Napoleon he seldom tried to destroy the hostile army. Indeed after Zorndorf he deliberately moved aside to let a beaten and cornered enemy escape, rather than accept the losses of trying to annihilate him. In his favorite oblique order only his advanced guard and part of his centre were heavily engaged, his "refused" wing almost never. When he fought a general action he aimed merely at dislodging the hostile army from its position and compelling it to retreat, meanwhile taking prisoners who—under the cosmopolitan conditions of the time—usually enlisted under him! To reduce the losses from his own ranks by desertion, he ordered his generals not to fight near woods and villages where men could hide.

To take an often quoted modern instance of caution in handling an irreplaceable fighting force, Jellicoe at Jutland, with his irreplaceable naval mastodons, was cautious because he well knew himself to be the only man on either side who might lose the war in an afternoon.

Significantly enough in view of later Prussian developments, that country under Frederick did not fully conform to the

Eighteenth Century theory of voluntary enlistment. Such was her poverty that, had she done so, even the King's care not to go all out but always to keep something in hand for next year's campaign would not have enabled her to support the long wars against heavy odds into which his ambition led him. The Prussian expedient was to recruit voluntarily only a third of the war strength army and to keep only that third as a nucleus permanently with the colors in peace. The remaining two-thirds were systematically drafted from the peasantry—it was not permitted to draft artisans who were considered too valuable to the state. In fact the men of the nucleus were allowed to ply a trade in their leisure during peace. The drafted peasants were compensated by giving them privileges as against their feudal lords. Originally they were trained for a year and then furloughed for twenty years if not called for war service. Later they were at first trained only for three months and were afterwards recalled for four or six weeks drill per year. While on furlough their labor added to the productivity of the country, and the treasury was spared the burden of their keep.

Returning to the general military spirit of the Eighteenth Century, the atmosphere of wars fought without overwhelming passion, by Sovereigns who respected the conscience of their enemies and did not expect to crush hostile states altogether, was favorable to skillful manoeuvring rather than to straightforward, rough and tumble fighting. An Eighteenth Century commander who chose to deliver battle without first putting his enemy at a disadvantage was considered a wasteful fool.

In every possible way the lives of the tough Eighteenth Century soldiers were conserved. Usually they were put into winter quarters during the bad season. A liberal use was made of fortification both permanent and temporary, from behind which you can inflict loss on an attacking enemy while remaining sheltered yourself. At the same time this facilitated supply, for an immobile force can easily be furnished with whatever necessities are to be found in the area which it covers, while troops in rapid motion have a much more difficult time. On the offensive a favorite method was to move against the enemy's communications rather than attack him directly. Even in the murderous work of a siege, with the opposing forces constantly

in close contact, every effort was made to inflict loss without receiving it.

To understand not only the siege work of the Eighteenth Century but also the spirit of its wars one can hardly do better than begin with the great work of Vauban "*De L'Attaque Et De La Défense Des Places.*" There have been few more experienced and hard headed soldiers. An orphan of a family technically noble but of no great lineage, and wretchedly poor for their station, practically his entire life was spent on active service. He directed forty sieges, and took part in over three hundred combats. And yet economy of method is his constant watchword. A siege, Vauban says, should be undertaken only upon the decision of the King in council with his Cabinet Ministers; no lesser authority should sanction so important and expensive an operation. A useless number of high ranking officers should not be employed, again because of the expense of their pay. The time of year for beginning the operation should be carefully chosen. You should attack either early in the season before the enemy can take the field with all his forces, or so late that a part of his troops have already gone into winter quarters. On the other hand, nothing is more ruinously costly than a winter siege. Vauban's great innovation was the system of "parallels," lateral trenches across the whole front of the attack, to shelter the advanced guards who protected the sappers as the latter worked forward the boyaux or communication trenches through which the place was approached. When within effective range of the besieged, one's working parties should seldom be allowed to dig in the open "as happens too often among the French and without advancing them much." Even at night it is better to work forward by sapping, covered against everything but the enemy's artillery. "One should observe the general rule of never exposing one's people without much reason." At the head of each boyau, to guard the sappers, a small detachment will be enough, and this detachment together with the sappers should retreat in case of a sortie by the besieged. Never defend unfinished siege-works obstinately, let the enemy begin to destroy them if he likes, for you will inflict heavier loss by firing on him from the nearest parallel as long as he is willing to expose himself. Don't

hurry too much, and don't counter-attack until the sallying party has been weakened and thrown into disorder by your fire. Nor must the counter-attack be pushed too far, the troops making it should take cover quickly, for the hostile fire will be ready and dangerous. In fact one of the objects of a sortie is to draw the besiegers under a well prepared fire from the place. Do not push forward the boyaux until the trenches and batteries of the supporting parallel are in good shape. Then if all your works flank each other at effective range, sorties will be useless. Against good parallels and a watchful besieger they should all fail. Labor and expense can be saved by resisting the desire of most artillery officers to fire too soon. Although the extreme range of cannon was then about two thousand yards, they did little damage to good parapets at more than half that distance. Consequently Vauban held that they should be put in battery only on the line of the first parallel or even on that of the second. Characteristically enough, bomb batteries, that is those firing shell as opposed to solid shot, should fire on the defences but not on the houses of the besieged place, for damage to civilian structures does not help to take the town, and turns to the detriment of the besieger. You waste ammunition on them, and when at last the fortress is yours you have to rebuild them at your own expense.

When you come to close grips with the defences, the same principles of economizing lives and material hold good. Head cover must still be provided for the trenches of close approach, but this can be done with less expense than formerly, for Vauban's invention of ricochet firing usually silences the fire of the place so that the old, elaborate and costly head cover of squared timber and heavy logs protected against fires by raw hide is no longer needed. When you have made a breach, do not be hasty in assaulting it. Put some sappers to work at widening it on either side, and have your artillery ready to fire when signalled. If the enemy sallies out against your sappers he must expose himself. Withdraw them and have your guns fire upon him. They will soon drive him back whereupon you should cease fire and go on sapping. When at last you enter the breach, do so at first with small parties under orders not to persevere but to withdraw if seriously opposed. Once more,

never hurry or act thoughtlessly, act always by the surest ways. Two or three hours matter little in a siege, and in that time you may lose many men by acting unwisely or hurrying too much. Never make large attacks which cause heavy losses. Against a well conducted siege the besieged lose at least as many men as the besiegers. Moreover, if you act methodically your people will be on duty only one day in every five or six, while the besieged must have one-third of their number on guard, one-third in bivouac, and the remaining third serving cannon and working on retrenchments and repairs. At the same time, in the part of the place which is being attacked, they are searched by gun fire which causes great loss. All told, therefore, fortified places surrender earlier than they used to do. What with losses and fatigue, their garrisons are so weakened that hardly any—"I dare say none" says Vauban—will make a last, desperate attempt at resistance, the failure of which would expose them to be cut to pieces.

The threat of massacring all within a place taken by assault brings us back for a moment to the most savage form of war. In all ages there have been men to argue with harsh logic that a garrison which kills as many assailants as it can until its defences are finally stormed cannot then claim mercy from the sorely tried besiegers. But we recover the typical Eighteenth Century spirit when we find Vauban saying: "The Governor of a besieged place, having no more terrain in which to retrench himself, and having destroyed the retrenchments which he will be forced to abandon, may capitulate with honor." Louis XIV's Chief Engineer reaches his climax as follows: "Thus our attacks reach their end by the shortest, the most reasonable, and the least bloody ways that can be used."

The Eighteenth Century mind, nourished upon mathematics and in love with precision, was delighted with the regularity of its method of siege-work, by which the resistance of a fortress or even of each part of one could be calculated in advance to a day. An experienced staff officer like Puysegur in his "Mémoires" noted of his own time that only position warfare had principles based upon geometry! Turpin de Crissé, a general officer of fifty years service and a widely read military author, deploring the uncertainty of campaigns, goes so far as to sug-

gest that they should be regulated and calculated in advance like sieges by methods which would reduce them "almost to a certainty." According to him "... a general needs prudence rather than audacity, genius and foresight rather than intrepidity. If advancing were all that is necessary, the most daring general would always win. As besiegers attack works successively and in order, so field armies should not leave in their rear fortified towns, fortresses, or even entrenched posts, which would make retreat difficult. As no besieger would open his second parallel without fully establishing his first, so a field commander, invading a province or country which always has some principal point, should begin by establishing a "first parallel" and a general depot for subsistence. Communications must always be kept open and flanks secured by taking towns and other strong places."

If this seem over-formal, we may remember that in 1812 Napoleon's failure to secure his flanks as he pushed his narrow spearhead of occupied territory forward to Moscow, intensified his subsequent disaster.

In leisurely fashion Turpin de Crissé continues: "Even if a whole season is spent in preparing the "first parallel," still the general thereby has good winter quarters and is prepared for the next campaign."

The same fondness for rules, neatness and regularity, everywhere present in the literature, the architecture and even the formal gardening of the Eighteenth Century, combined with its armament and with the nature of its usual theatres of war to shape its infantry tactics.

The latter half of the Seventeenth Century saw the gradual disappearance first of armor then of the pike. At the same time the musket—already a most effective weapon at ranges of a hundred yards or less, with its heavy bullet weighing about an ounce which smashed its victim as would an anti-tank gun or elephant gun today—became capable of more rapid fire. "Firearms and not cold steel," said Puysegur, "now decide battles. If you don't believe it, go and look at the wounded in hospitals after a general action." Consequently infantry combat became chiefly a matter of obtaining fire superiority. In the earlier days of musketry this had been attempted by

means of a continuous fire. The men had been formed six or eight deep, and each front rank man after discharging his piece would fall back behind the original rear rank man of his file. There he would reload and be ready to shoot again by the time those who had originally stood in front of him had emptied their pieces. As improvements in the musket made for quicker loading, the number of ranks was reduced to five and then to four.

At this point, however, soldiers discovered the great effect of the volley, that is the simultaneous discharge of many muskets, together with the fearful moral strain which could be put upon an enemy by "reserving" fire until after that enemy had fired. The object being now to make each volley as crushing as possible, the old rear ranks were suppressed and the men formed three and afterwards only two deep so that all might shoot at once. This of course increased the frontage. The men were forbidden to fire before the command, and the emotion of seeing one's enemy coming gradually nearer and nearer would break the nerve of insufficiently disciplined troops. Either they would disobey orders and deliver a scattering and therefore ineffective fire at too great a range, or else their officers, fearing such a fiasco, would give the command for a volley too soon. In either case, while those who had fired too soon were reloading, the better troops would continue to advance and would deliver their volley at murderously close range where every shot went home. Since a first "perfect volley" like Wolfe's at Quebec might decide an action, the admirable discipline and high tactical training of Eighteenth Century infantry concentrated upon the attempt to deliver such a volley. It became a maxim that he who fires first is defeated, so that the English officer who at Fontenoy tauntingly invited the French to fire first was by no means playing the fool. Behind his bravado was the soundest of tactical principles. The astonishing ability of Eighteenth Century regulars to stand fire without breaking, cannot be too highly praised. As Bland's popular handbook put it: "draw your enemy's fire if you can, and if your battalion still advances you must win . . . it being certain that when troops see others advance, and going to pour in their fire amongst them when theirs is gone, they will immediately

give way, or at least it seldom happens otherwise." Against good troops, obstinate in reserving their fire, Bland recommends getting close, firing first one's self, and then rushing in with the bayonet under cover of the smoke. But, he adds, you must charge at once or they may beat you. At Blenheim in the assault on Blenheim village, the defending French held their fire until the advancing English were within thirty paces, while the latter held theirs until the leading brigadier actually reached the barricades and struck them with his sword.

Naturally all this demanded the most careful alignment—anyone who got a few inches ahead of his comrades immediately to the right or left was certain to have his ear drums blown in by the muskets close beside and a little behind him. Anyone who has practiced close order drill knows how difficult it is, even with only a single company peacefully advancing over a smooth parade ground, to keep perfect alignment. Hence the endless Eighteenth Century drilling. Even then an advance on the battlefield had to be made slowly, in cadence, and at what we would call the half step, with frequent halts for dressing to rectify the line. Moreover the line must never be broken even to follow a retreating foe, both Puysegur and the Spaniard Santa Cruz are emphatic on this point. Puysegur adds: "When a unit has defeated its opposite number, send a part of your men forward to prevent the enemy reforming, and with the rest attack the flanks of the neighboring hostile battalions which are still standing firm."

Even with the most perfect discipline, Eighteenth Century tactics were highly specialized in that they required open and reasonably unobstructed country over which to fight. In woods and on ground too much cut up by obstacles they became impossible. It so happened however that most of the cultivated country of Western and Central Europe was of precisely this open sort. Even today the English or American traveler on the continent, accustomed to seeing fields fenced off in one way or another, is struck by the openness of the continental fields on which the divisions of ownership are marked only by little boundary stones. This is a matter of immemorial tradition and was much more marked in the Eighteenth Century than today. It has been estimated that less than fifteen per cent of

the area of Britain, even if we include the rings of gardens around the cities, was enclosed by the year 1700. On the continent, vineyards and olive groves would usually be protected by a fence or hedge, and would in any case have broken up the strict Eighteenth Century formations. Most of the Lombard plain including Piedmont and Venetia was already all hedges and water ditches. A considerable area of what is now Belgium and northern France, the old county of Hainaut centering about the river Haine as its axis, and extending almost to Lille and Turcoing on the north and almost to Sedan on the south, had been enclosed from the beginning of record. Before the beginning of our era, Caesar just before his fight with the Nervii near Maubeuge had been forced to clear the hedgerows. Also the lesser river valleys of Normandy were enclosed and some random enclosure was to be found in occasional other districts such as upper Bavaria. But in the main, open, unfenced fields over which the long Eighteenth Century battle lines could manoeuvre and fight were the rule.

Thus armament and terrain conspired to give the mathematical, accurate Eighteenth Century spirit scope. The temper that hated all blur, smudge and vagueness was able to do much toward reducing even the agonized hurly-burly of combat to geometrical diagrams and rules.

In sea fighting as well, the insistence upon a strict line of battle appeared. From the Sixteenth Century until almost within living memory warships carried almost all their cannon on the broadside so that a fleet could develop practically no fire power except in line ahead, one after the other. So that the fire might be concentrated, the distances between ships had to be as short as safety permitted, just as soldiers on land had to keep touch of elbow. A straggling line with ships too far apart would permit a more closely arrayed hostile fleet to concentrate the fire of two or more ships on each one of yours.

To the weaknesses of the Eighteenth Century cult of the line, we shall come later. For the moment let us note its rational foundation and elements of strength. In land warfare the high military quality of good Eighteenth Century troops permitted what is to us an astonishing disregard of the capital factor of numbers. Puysegur indeed puts superior numbers

among the means to victory, but only on a par with superior disposition in order of battle, and superior mobility of one's own line as compared with that of the enemy. Most important of all were the maintenance of order and discipline, and the consequent using of one's weapons to the best advantage. Turpin de Crissé says roundly: "Battles are won not by numbers but by the manner of forming your troops together with their order and discipline," adding that often nearly half of one's forces were not engaged. Santa Cruz writes: "Position and terrain are more important than numbers. An impregnable position is better than one on a plain even though the latter has more troops to hold it than the former." Marshal Saxe in a famous saying held that a field army should not exceed 46,000. . . . "A greater army is only an embarrassment." According to him such an army should suffice for any mission which a government might entrust to a good general even though his opponent had twice as many. The English general Burgoyne, who despite his failure at Saratoga was a highly intelligent man, wrote in a passage which the present writer has quoted elsewhere: "... in most states of the world, as well as our own, the respect and control and subordination of government at this day in great measure depends upon the idea that trained troops are invincible against any number or any position of undisciplined rabble. . . ." In part this contempt for numbers arose from the difficulties of supplying large forces by means of the magazine system. Too large an army was hobbled and could not move. Santa Cruz notes that in the Low Countries the many navigable rivers and canals have enabled armies of a hundred thousand to be supplied, while in Spain it is hard to supply armies of twenty thousand, there being few navigable rivers or good wagon roads so that pack transport must be used. Puysegur observes: "An army without bread will disband, especially in exhausted country." According to him, during the Thirty Years War supplies were easily furnished in Flanders and Catalonia with their many frontier forts; provision wagons reached camp every four or five days. In Germany on the other hand where it took time to requisition grain and bake bread, the difficulties of supply increased the savagery and destructiveness of the war. Beside the supply

question, the linear tactics also discouraged large numbers; the difficulty of manoeuvre and of strict alignment naturally increased with the width of the front. But independently both of supply and of linear tactics, it was the high military quality of the Eighteenth Century regulars which permitted them to despise mere quantity, i.e., mere numbers of lower grade troops.

When it was necessary to supplement the magazine system by living off the country, Eighteenth Century generals preferred to do so by a system of local indemnities or forced requisitions levied upon occupied territory and known as contributions. Santa Cruz discusses this aspect of war at some length. Your policy, he says, must depend upon your military situation. If you do not intend permanently to hold the hostile regions which you occupy, you should weaken the enemy by heavy contributions as the French did in Holland in 1672. On the other hand, if your contributions are too heavy, people will leave the neighborhood rather than pay. If the hostile peasants and villagers flee, then you should give public notice that you will burn their farms and villages if they do not return. When you have to evacuate the region before fully collecting the contributions which you have formally demanded, take hostages to insure payment in full. If you must evacuate without time to collect contributions at all, you may destroy and ravage the countryside as the French did in the Palatinate in 1689. Turning from Santa Cruz for the moment, the reader should note that this devastation of the Palatinate, the chief instance of military cruelty in wars between christian nations from 1648 to 1793, comes early in the period. A second conspicuous but less grave instance, the ravaging of Bavaria by the English and Imperialists during the campaign of Blenheim in 1704, is also early. Returning to Santa Cruz, it is legitimate, he says, to lay waste the countryside in order to make a hostile advance difficult. But if the region which you devastate is yours, you must later pay the people so that they may re-establish themselves.

Accustomed as we are to the centralized governments and the fearful popular passions of our time, some incidents in connection with contributions today seem scarcely credible, and throw a vivid light upon the spirit of Eighteenth Century war.

In September 1707 the inhabitants of the French city of Lille vehemently objected to the plan of the French Marshal Vendôme for entrenching a defensive line from Lille to Tournai. They were bound, they said, by a "treaty" with the enemy to make contributions, so that the line would not prevent contributions being levied upon them. Also, what with the expense for workmen, wagons, trees and logs cut, the line would cost more than many years of contributions!

So much was the closely reasoned chess game of Eighteenth Century strategy the jest of Nineteenth Century theorists of war that only today are we beginning to appreciate its good sense. From Clausewitz to the unhappy Grandmaison, to Foch and Ludendorff, military thinkers stubbornly identified the idea of war with that of the utmost violence and the most fearful sacrifices. The most famous passage of contempt for the rational Eighteenth Century notion of winning with the least possible expenditure of blood is that of Foch in his "Principles of War." The future Commander-in-Chief of the Allies of 1918 pours out his scorn upon "... methods of ... war without decisive results, with limited purpose, war of manoeuvres without battles, of which the following are examples:

"The type of war which Joly de Maizeroy defined as follows: 'the science of war consists not only in knowing how to fight, but still more in avoiding battle, in choosing one's positions, in planning one's moves so as to reach one's goal without risk ... let battle be given only when judged unavoidable.' To evade, to put off, such is the formula.

"The war without battles which Massenbach held up as the highest degree of art when he said of Henry, brother of Frederick, whom he (i.e. Massenbach) greatly admired:

" 'He knew how to woo fortune by bold moves; more fortunate than Caesar at Dyrachium, greater than Condé at Rocroi, he attained like the immortal Berwick, victory without battle'."

After a few more digs at Massenbach who, notwithstanding his large share in the Prussian disaster at Jena, was at least the organizer of the Prussian General Staff, Foch next goes for Saxe: "It is that form of war which Marshal Saxe..., a man

of indisputable worth but with the ideas of his time, characterized as follows: 'I do not favor battles, especially at the beginning of a war. I am sure that a clever general can wage it as long as he lives without being compelled to battle'."

Foch continues: "Napoleon, penetrating into Saxony in 1806, writes to Marshal Soult: 'I desire nothing so much as a big battle.' One seeks to avoid battle all his life; the other seeks it as soon as possible."

Without attempting defense of Massenbach, let us glance at the record of Berwick. We find James II's illustrious bastard indeed careful of the lives of his men, self-possessed and cautious, but bold and rapid in action at need. He defended southeastern France successfully from 1709 to 1712 without a single decisive battle, but he had previously won the notable victory of Almanza. As to Saxe, in 1744 we indeed find him with a smaller force baffling a larger hostile army, and continually harassing his enemy without being compelled to battle. But we also find him winning the three pitched battles of Fontenoy, Rocoux and Lauffield. In the very passage which Foch so contemptuously quotes, Saxe is contending that a skillful general ought not to find himself compelled to fight a general action when at a disadvantage. Instead, says he, such a general should wear down his enemy "by frequent small engagements." Saxe goes on: "I do not mean to say . . . that when an opportunity occurs to crush the enemy that he should not be attacked, nor that advantage should not be taken of his mistakes. But I do mean that war can be made without leaving anything to chance. And this is the highest point of perfection and skill in a general." As with Berwick and Saxe, so it was with the other noted Eighteenth Century Captains and writers on war. The talented executive soldiers all prided themselves on their ability both to manoeuvre and to fight, while the commentators applauded excellence of either sort. Examples could be repeated in numbers sufficient to weary the most persevering reader. The thing could be illustrated again and again from any one of the great generals of the late Seventeenth Century, from Montecucculi, Turenne, Condé or Luxemburg. Montecucculi wrote in his memoirs: "Do not avoid

battles but seek them under advantageous circumstances. . . . It is chimerical to think that you can make large conquests without battle." Luxemburg had to his credit not only his famous retreat of 1673 from Utrecht to Maastricht with only twenty thousand men against an army of seventy thousand which was unable to cut him off or force him to battle, but also the victories of Fleurus, Leuze, Steenkirk, and Neerwinden. So obvious a point—which the reader can quickly verify for himself from any good encyclopedia—must be emphasized only because of the astonishing battle mania of Nineteenth Century military thought which reached its climax in 1914-18.

With the strength of the modern defensive and the fearful losses of the war against Germany fresh in our minds, the complex chess game of Eighteenth Century strategy takes on a new meaning. Our eyes have been rudely opened to the importance of defensive works and advantageous ground upon which pre-democratic campaigns turned. Fortescue the historian of the British Army writes: "A glance at any old map of Flanders shows how thickly studded was this country with walled towns of less or greater strength, and explains why a war in Flanders should generally have been a war of sieges. Every one of these little towns, of course, had its garrison; and the manoeuvres of contending forces were governed very greatly by the effort on one side to release these garrisons for active service in the field, and on the other to keep them confined within their walls for as long as possible. Hence it is obvious that an invading army necessarily enjoyed a great advantage, since it menaced the fortresses of the enemy while its own were unthreatened. Thus ten thousand men on the Upper Lys could paralyze thrice their number in Ghent and Bruges and the adjacent towns. On the other hand, if an invading general contemplated the siege of an important town, he manoeuvred to entice the garrison into the field before he laid siege in form. Still, once set down to a great siege, an army was stationary, and the bare fact was sufficient to liberate hostile garrisons all over the country; and hence arose the necessity of a second army to cover the besieging force. The skill and subtlety manifested by great generals to compass these different ends is . . .

only to be apprehended by closer study than can be expected of any but the military student.

"... The object of a campaign in those days was not necessarily to seek out an enemy and beat him. There were two alternatives prescribed by the best authorities, namely, to fight at an advantage or to subsist comfortably. Comfortable subsistence meant at its best subsistence at an enemy's expense. A campaign wherein an army lived on the enemy's country ... was eminently successful, even though not a shot was fired. To force an enemy to consume his own supplies was much, to compel him to supply his opponent was more, to take up winter-quarters in his territory was very much more. Thus to enter an enemy's borders and keep him marching backwards and forwards for weeks without giving him a chance of striking a blow, was in itself no small success, and success of a kind which galled inferior generals, such as William of Orange, to desperation and so to disaster."

Part of the power of Eighteenth Century generals to refuse battle sprang from temporary circumstances, the clumsiness inseparable from rigid line formations and the want of a divisional system—for lack of which the order of battle of an army was thought of as a single block. But the essence of the matter was the rational desire to impose one's will upon an enemy without suffering heavy losses.

The memoirs of Feuquières, which Frederick the Great considered the standard work on the whole art of war, preserve the same intelligent balance between fighting and manoeuvring. The author was an excellent fighting soldier; Luxemburg's great victory over William III of England at Neerwinden had been decided by his personal initiative. Moreover he declares that a battle at the beginning of a war, when it can be fought with the chances in one's favor, usually decides matters. At the same time he discusses carefully the conditions under which battle should and should not be given, notes the importance of threatening the enemy's bases when on the offensive, and holds that on the defensive an able general should be able to prevent his army from being forced to a general action. When on the defensive, says he, your object should be to gain time. Therefore put your infantry in fortresses, for fortification imposes

delay on an aggressor. At the same time keep your cavalry in the field, and with them circumscribe the enemy, thus limiting the area subject to devastation or contributions. In a phrase reminiscent of Saxe he recommends constant alertness in seizing advantageous opportunities for small combats by which the enemy's superior strength can gradually be worn down and his army finally ruined.

Santa Cruz shows much the same spirit. On the defensive, he notes, you must choose between strengthening the garrisons of your fortresses or your field army so as to give battle, for your troops will not be numerous enough to do both. Avoid battle when your enemy has siege material and you lack it, because in that case he can take full advantage of a victory and you cannot. Before fighting, provision your fortresses so that if you are defeated they can sustain a blockade long enough for you to rally and fight again. To be free to refuse battle, camp far enough from your enemy so that you can decamp without his being able to attack your rear guard if he suddenly moves toward you. An entrenched position from which you will finally have to move is dangerous, especially if it has defiles behind it which slow up your retreat. While you are retiring from your trenches your opponent can advance and fall upon your rear unless you are some distance from him. On the other hand, you can advance toward him and still refuse battle if you keep a natural obstacle such as a defile or a river between the armies.

Compared with the colossal armed hordes of our own time, the armies with which Eighteenth Century commanders fenced so subtly were small. Obviously the scale of any military effort depends on the numerical relation between the armed forces and the populations which support them. Here we encounter two difficulties: First, Eighteenth Century population strengths, although they can be estimated with some approach to accuracy, cannot be certainly known for want of full statistics. Second, the exact strength of the armies of the time is often uncertain because they are frequently given in terms of infantry and cavalry rank and file alone, excluding all commissioned officers, sergeants, company musicians, and artillerymen. In such a case, to find the total combatant strength of a

force from its numbers in rank and file we must add a considerable percentage. For infantry and cavalry the detailed returns studied by the present writer give an additional four to five percent for officers, and another nine to thirteen and a half percent for sergeants and company musicians. Accordingly, if we assume a given strength to be that of the rank and file, then the total infantry and cavalry strength is found by adding from thirteen to eighteen and a half percent to the original figure, and the total combatant strength by adding still another but not negligible percentage for artillerymen. All told therefore, we cannot always trust the figure given for an Eighteenth Century force.

Beginning with France, throughout most of the period the chief military power, her population under Louis XIV is usually estimated at nineteen million. Since a fully conscript country mobilizes about a tenth of its living souls, a mass army of the type all too familiar to our own democratic day would have given Louis XIV nearly two million. Instead the most intense efforts of that ambitious Prince, during most of his reign the master of Europe, could never raise a quarter of such numbers. In 1660 he had an armed strength of only a hundred and twenty-five thousand. For the invasion of Holland twelve years later, these numbers were raised to one hundred and eighty thousand, but after the treaty of Nimeguen they were reduced to one hundred and forty thousand. Throughout the early part of the great reign the French field armies were only from fifteen to forty thousand strong. In 1674 Turenne in Alsace and the Palatinate had only twenty-five thousand, and the field armies in the other theatres of war were still smaller except Condé's in Belgium. Later, when struggling against practically all Europe in the war of the Spanish Succession, Louis had two hundred and sixty-four infantry and one hundred cavalry regiments which at full strength would have totalled half a million. In fact, however, these units were far from full; the highest estimate of effectives really in service is four hundred thousand.

The French army was at this time by far the largest in Europe. In England the professional soldiers with which Crom-

well had held down an unwilling people, although unprecedentedly numerous for the island, had amounted only to sixty-five thousand, and on the restoration of Charles II the standing army had been cut to four regiments of infantry plus one regiment and two supplementary troops of cavalry. For the English wars against Louis XIV, parliament was accustomed annually to vote expeditionary forces of from forty to forty-five thousand of whom about half would be British subjects and the rest foreigners in British pay.

During the latter part of Louis XIV's reign, field army and battlefield strengths somewhat increased. For the campaign of 1692 the French field armies in Flanders aggregated over a hundred and thirty thousand but this was a high point on their side. Thereafter they fell off while those of the Allies increased until the latter, with field armies in Flanders of a hundred and ten or even one hundred and twenty thousand, outnumbered their French opponents. Turning now to battlefield strengths, at Fleurus in 1690 the French Marshal Luxemburg with forty-five thousand defeated an allied force of thirty-seven thousand. Neerwinden was won by eighty thousand French against fifty thousand Allies. At Blenheim each aide had about fifty-two thousand, and at both Ramillies and Oudenarde each had about sixty thousand. At Malplaquet each had about ninety thousand, a high point for Eighteenth Century battle strengths, and one which on the French side is hard to reconcile with the exhaustion of France and the grave inferiority of French numbers—only sixty-nine thousand against the Allied one hundred and ten thousand—at the beginning of the campaign. In the other theatres of war, however, numbers were considerably less. In Spain, Berwick commanding for the French at the decisive battle of Almanza had only twenty-five thousand against fifteen thousand for the Allies.

Under Louis XV the French population had risen to about twenty-two million, while the peace strength of the army had fallen to one hundred and eighty thousand, including sixty thousand militia, and the English government estimated that these numbers could not be more than doubled for war. Under Louis XVI on the eve of the revolution the peace time numbers

of the French regulars including artillerymen had risen to over a hundred and seventy thousand, the number of militia remaining the same at sixty thousand.

Frederick the Great's Prussia, a state much smaller and poorer than either England or France, was more highly organized for war than any contemporary power. In 1740 at the outset of the War of the Austrian Succession it supported an army of a hundred thousand—if indeed its population numbered only two million, then its armed men were actually half as numerous as a fully mobilized universal service, conscript force would have been. Although the spirit of this army was professional, yet in peace, as we have seen, only about a third of its enlisted men were permanently with the colors. Moreover many of the professional enlisted men were foreigners. Having in the War of the Austrian Succession increased his dominion by the successful theft of the considerable province of Silesia, Frederick in 1756 at the opening of the Seven Years War had a hundred and fifty thousand troops. On the other hand, he was never able to concentrate fifty thousand men on a battlefield except at Hohenfrieberg where he had sixty-five thousand, and usually his battlefield numbers ranged from forty-three thousand at Leuthen and Kunersdorf to twenty thousand at Mollwitz.

In proportion to the numbers engaged, the losses in the Eighteenth Century battles were terrific. At Malplaquet out of the ninety thousand Allies one authority puts the loss in killed and wounded as high as thirty-three percent, i.e., thirty thousand, of whom between fifteen and eleven thousand were killed. Another writer makes the Allies lose twenty thousand, over twenty-two percent. In the Seven Years War whole armies would often lose from fifteen to twenty percent in killed and wounded in a few hours fighting. In Frederick's victory at Torgau he lost thirty percent; in his great defeat at Kunersdorf he actually lost forty-eight percent without his field army being dissolved. At Zorndorf forty-two thousand Russians lost fifty percent killed and wounded, a proportion which is a world's record for a field army during a single day's fighting in which the defeated side is neither crushed nor unresistingly massacred. These same sorely tried Russians were able to rally

during the night, and occupied next day a defensive position which Frederick did not see fit to attack!

On the other hand, so small were the Eighteenth Century armies that such butcheries, however horrible to the troops engaged, set up no great strain upon society as a whole. For instance at Zorndorf the Russian loss, although almost unbelievably high in proportion to the numbers present, amounted only to twenty-one thousand. In 1692 the battle of Steenkirk was considered the severest action ever fought by infantry, yet each side lost only about three thousand killed and the same number wounded. In 1704, the year of Blenheim, the British army and navy played their great part in deciding the fate of Europe at a cost of less than five thousand dead. The profound and enduring horror in England at the butchery of Malplaquet greatly influenced the English government's decision to make a separate peace with Louis XIV—if indeed it did not directly cause that decision—yet that murderous action cost the lives of only forty officers, and five hundred and eleven men out of the British contingent present on the field. The contrast between such figures and the appalling mass massacres of our own democratic era tells its own story. G. M. Trevelyan, the latest English historian of Queen Anne's Wars, noting the tiny British losses of 1704, goes on to say: "Between 1914 and '18 the average loss of life in war to Great Britain per year was about two hundred thousand. The population of the island had risen about seven times and the cost of war in youthful life about forty times."

The tiny losses of the little Eighteenth Century wars were not only inconsiderable in themselves; the strain which they caused society was still further reduced by the way in which the armies were recruited. To the professional soldier, hardship, wounds and death are but incidents in his trade. They are regrettable, as unsuccessful operations are to surgeons, but a certain proportion of such mishaps is to be expected. "E la commun del mestier," said a king of Italy after narrowly escaping an assassin's bomb: "It is a commonplace of this job." Eighteenth Century officers came from upper classes which prided themselves upon their high military tradition and willing acceptance of the heavy risks of war. The rank and file

were recruited from the more adventurous poor men, always the most combative of humankind after the young aristocrat. In England they were sometimes criminals who had been offered the alternative of enlistment or jail. On the rare occasions when they were released from the strict Eighteenth Century discipline, most of them were inclined to somewhat evil ways. Society looked upon the killing and wounding of such lively ruffians with a certain equanimity. Quiet folk thought them a good riddance.

In addition to the small size of the Eighteenth Century professional armies and the classes from which they were recruited, still another factor reduced the social strain of Eighteenth Century war: the cosmopolitanism of the fighting men. This cosmopolitanism was not so great as it had been among the mercenaries of the Middle Ages and the Wars of Religion; the habit of keeping up permanent standing forces made for continuity, and in Western Europe the beginnings of national patriotisms were already strong. Nevertheless the invariable rule that professional armies recruit their rank and file from the cheapest available human material was observed with such indifference to nationality that sometimes as much as one-half of the pre-revolutionary French army was of foreign origin and one-third of the Prussian. Throughout Europe the officer class thought it no disgrace to take service under a foreign Prince, while the rank and file of a defeated force—as we have seen earlier in this chapter—were often willing to enlist in the army of the victor. Since people cannot be expected to grieve for the deaths of foreigners, even when killed in their own service, as much as for the loss of their own countrymen, the cosmopolitan element in the Eighteenth Century armies helped to keep war remote from the average man.

The same cosmopolitanism obtained outside the armies. The Europe of Louis XIV and the Eighteenth Century, in which all educated men were bound together by the universal classic culture and the almost equally universal use of the French language, the following of French arts and fashions, was still one thing. While the professional troops were performing their miracles of endurance and valor, civilians went to and fro freely between their own country and the one with which it happened

to be at war. During the Seven Years War, a man of letters like Sterne could go from England to Paris, frequent Diderot and Holbach, be cheered by admirers of his character of Uncle Toby, and attend theatricals at Frontignac among an English colony there without anyone troubling in the least over his citizenship in a hostile state. So little was Europe then troubled by the existence of war.

Thus the armed conflicts from the end of the Religious Wars to the beginning of the French Revolution were socially tolerable. Let us take first the early part of the period, the warlike age of Louis XIV. When he came to the throne as a little boy the horrible Thirty Years War still had five years to run. When he died after reigning for seventy-two years, only nineteen of these had known peace. It is no wonder that his continual wars, ending in that of the Spanish Succession during which for thirteen years France stood alone against all Europe, exhausted his country. The wonder is that they did not do so to the point of ruin and despair. Indeed the exhaustion was more that of the Royal finances than that of the French people. Ever since Henry IV the landowning French peasant had been growing in strength and independence, and those who know him will agree that his invincible resistance to heavy taxation, not any general impoverishment, was the real difficulty. Anyone who doubts whether the age of the Grand Monarque as well as the Eighteenth Century was an era of strictly limited war need only imagine any great contemporary state attempting to fight against powerful rivals for fifty-three out of seventy-two successive years! A quarter of a century after Louis XIV's death most of Europe could make war for eight years over the Austrian Succession, and not long afterwards fight again in the Seven Years War, all without more than ruffling the urbane surface of civilized life.

In a passage from his "Decline and Fall of the Roman Empire" the historian Gibbon, writing apparently in 1781 the year of Washington's victory at Yorktown, said: "In war the European forces are exercised by temperate and undecisive contests. The Balance of Power will continue to fluctuate, and the prosperity of our own or the neighboring kingdoms may be alternately exalted or depressed; but these partial events cannot

essentially injure our general state of happiness, the system of arts and laws and manners, which so advantageously distinguish, above the rest of Mankind, the Europeans and their colonists."

Such were the limited wars of the Eighteenth Century which loved to call itself Augustan and was not wholly unlike that former time of serenity and order. The moral unity upon which this last successful and strict limitation of war was founded had weaknesses like all human things. Nor were its technical military principles exempt from the perpetual human temptation to let principle degenerate into routine. But for the moment let us remember only how wise and good were its restrictions upon violence and destruction. Its emphasis upon skill and manoeuvre as opposed to mere violence, its sterilization of hatred so as to permit morality and reason to reconcile strife and human solidarity, did indeed, as Ferrero says, constitute one of the noblest visions of the human spirit.

Chapter III

Mass War Begins

1792-1815

"It would have been better for . . . France if Rousseau had never lived . . . (and) . . . the future will show whether it would not have been better for . . . the world if neither he nor I had ever lived."

—NAPOLEON TO STANISLAS DE GIRARDIN.

"THE YOUNG MEN shall fight; the married men shall forge weapons and transport supplies; the women will make tents and clothes and will serve in the hospitals; the children will make up old linen into lint; the old men will have themselves carried into the public squares to rouse the courage of the fighting men, to preach hatred against" . . . (the enemy) "...and the unity of . . ." (our own people).

"The public buildings shall be turned into barracks, the public squares into munition factories; the earthen floors of cellars shall be treated with lye to extract saltpeter.

"All firearms of suitable calibre shall be turned over to the troops: the interior shall be policed with shot guns and with cold steel.

"All saddle horses shall be seized for the cavalry; all draft horses not employed in cultivation will draw the artillery and supply wagons."

The above quotation has a familiar ring. It might have been written yesterday, so completely does it accord with the idea of a "universal draft." None the less if you change the words in brackets so that the end of the first paragraph reads

"to preach hatred of kings and the unity of the Republic" you have the law passed on August 23, 1793 by the revolutionary French National Convention to assure the "permanent requisition of all Frenchmen for the defense of the country."

Thenceforward the prevailing type of war has been the same: great conflicts, fierce popular passions, and mass armies in which the entire manhood of the contending groups are forced to fight under the orders of governments possessed of greater power over the persons and purses of the governed than that wielded by any tyrant of old time. "Absolute" or "totalitarian" war was not invented by our generation. We owe it to the French democratic politicians who produced the armed horde which gives our whole period or phase of war its unity.

It is the business of this chapter to show how this calamitous phase of war began.

* * * *

Like all purely human things, the beneficent Eighteenth Century scheme was imperfect. The humanist cult of moderation, decorum and good manners, upon which its moral unity was based, lay under the shadow of a great disappointment—the failure of either side to win the Religious Wars and the consequent loss of religious unity in the West. While the horrors of the Thirty Years War were fresh in the mind of Europe, humanist restraint had been a welcome change, but with time it began to lose its power. It made no strong appeal to the imagination and therefore attracted an insufficient loyalty. It neither touched the populace nor warmly inspired even the leaders of society. On the personal side humanist decorum had not prevented Louis XV, head of the towering House of France, the greatest dynasty in Europe, from outraging opinion by openly taking as his mistress a prostitute like Du Barry. In international politics it had not kept Frederick the Great from seizing and holding Silesia by mere right of conquest such as had never been admitted among Christian states. Indeed Frederick had gone further; with Catherine of Russia he had committed the first of those crimes known as the Partitions of Poland, successfully tempting the devout Empress Maria Theresa of Austria to share in the spoils. Nor had any Eighteenth

Century state except aristocratic England cleared away the feudal privileges, once natural and admirable but now outworn, which obstructed the orderly administration of modern governments.

Meanwhile in France, the chief province of Europe, a new spirit had appeared. Its prophet was Rousseau, its formula "Liberty, Equality and Fraternity," its chief political symptom democracy, but its essence was a new idea of man himself. Where all previous teachers had recognized elements both of good and evil in human nature, Rousseau said: Man is naturally and essentially good. The evil in him is due to no inward defect, but has been artificially imposed upon him from without by bad laws and conventions supported by a tiny minority of villains who conspire against his natural virtues. Eliminate such monsters—a contemporary Bolshevik would have said "liquidate" them—change the offending laws, and earth will become paradise. Such ideas could be used in support of individual liberty pushed to the point of anarchy. The first sentence of Rousseau's "Social Contract": "Man is born free and is everywhere in chains," really means that man is everywhere in relation to organized society. On the other hand, the new Gospel could equally well be reversed to justify extreme socialism, communism, or any other governmental tyranny, for if men in the mass are essentially good, then their "general will"—in practice the majority of the moment—must also be good, so that no recalcitrant minority has any rights.

Even more important to the new democratic Gospel than liberty or the general will was equality. Where former philosophies had sought to neutralize the evil in man by intellectual and moral discipline, especially in the case of the *élites* such as the aristocrats and priests who were to direct society, Rousseau insisted that the common man was morally better than his social superiors precisely because he was less disciplined than they. Being less artificial he was more virtuous, and since it is abominable that vice should command virtue, he is consequently more fit to rule.

Fraternity was to be achieved not by a common discipline but by the spontaneous pouring out of untutored, natural emo-

tions. What democratic fraternity was really to be like we shall soon see.

The democratic formulae were admirable weapons with which to attack Medieval abuses—or what were felt to be such. Moreover they were Catholic phrases which woke sleeping but powerful memories of that Faith which had transformed Europe. “Liberty” recalled the Catholic insistence upon free will against the various prophets of inevitable doom. “Equality” reminded generous spirits of the majestic Christian doctrine of the equal value of all souls before God and his equal justice. “Fraternity” sounded like the religious brotherhood of all men under a common Father in Heaven, and the closer brotherhood of all believers. It mattered little that each great word had been subtly poisoned with so strong a venom that not all the subsequent rivers of blood and tears have fully washed it away, that democratic “Liberty” would choke the real liberties which alone matter, that democratic “Equality” would everywhere rouse the base envy of inferior men against their betters, that democratic “Fraternity” would mean in practice: “Be my brother or I will kill you.” Educated men today, looking back over the savage conflicts of the democratic era, can see how naturally these have flowed from the muddy source of Rousseau’s shallow and insufficient definition of evil. To us it is obvious that if people believe all men except a tiny minority of fiendish tyrants to be naturally good, then they will naturally go mad with rage at beholding the obvious imperfections of their real neighbors. But to the Eighteenth Century which, notwithstanding its humanist wisdom, had starved those passionate loyalties by which alone can wisdom be kept young, all this was hidden. The great words imposed themselves, lifting the hearts of men like bugle calls.

Almost from the beginning, however, a very different note was sounded, menacing but distant like far off thunder or the first ranging shot of a bombardment. As early as October 1789, the first year of the Revolution, the word “conscription” was heard in the revolutionary parliament. Two months later, on December 12, it was again spoken, this time by the member most in view for his knowledge of arms, Dubois-Crancé.

He was a noble turned revolutionary who had served first as

a private in the "gentleman's corps" of Musketeers made famous by Dumas, then as a lieutenant in the Guards, and had now been directed to propose a plan for military reform. The details of his scheme need not detain us. Briefly, he proposed compulsory service in a sort of universal citizen-militia, doubtless inspired at least in part by the militias of the ancient city-states, for—ironically enough—the men of the generation which was about to destroy classical moderation and decorum were saturated with classical reading.

What is important today in his speech is the general principle with which he supported his proposals. "Every citizen," he said, "shall become a soldier of the Constitution," because "every citizen ought to be a soldier and every soldier a citizen." The words expressed with an iron logic a necessary consequence of popular sovereignty. Kings had been, as it were, contractors for the national defence. Given so much money out of the taxes, they had charged themselves with the duty of protecting their people. By virtue of their office they were soldiers, with the colonels of their regiments for military sub-contractors under them, these last receiving money from the sovereign with which to hire soldiers after a fashion not wholly unlike the hiring of road menders or laborers for other sorts of public work. Unless he deliberately chose to serve, soldiering concerned the average citizen no more than the man in the moon. In France only a tiny fraction of the population, less than a third of one per cent as we shall see in a moment, had a measure of compulsion exercised upon them, and for a decade even that light burden had been made lighter still. Now, however, the citizen had become theoretically sovereign, and in return for the infinitesimal fragment of sovereignty nominally conferred upon him he must take upon himself a share of the military responsibility formerly borne by the monarch.

Men being what they are, we need not wonder that the Revolutionaries of December 1798 rejected such disagreeable logic. They were still in the revolutionary honeymoon, now from so many examples wearisomely familiar to all readers of history. They were optimists and pacifists, liberals and humanitarians engaged in the construction of an earthly paradise. Moreover almost all the commoners among them had been specifically

charged by their constituents to abolish the faint trace of compulsory service which still existed. They refused Dubois-Grancé's scheme, and he, having failed to establish military servitude on a scale never before proposed in any modern state, consoled himself by obtaining a law whereby any slave who touched French soil should become free!

After the first revolutionary steps, however, men found themselves dragged along as if by some irresistible force. Within little over two years France was to find herself at war.

The moral responsibility for the French declaration of war against the Hapsburg Emperor in April 1792 was mixed. Any sharp innovation naturally provokes resistance; even today things like cannibalism or human sacrifice would be sternly put down. The established governments of Europe could hardly be indifferent to the Revolutionary threat to the political and social order. Louis XVI, although not yet wholly deprived of power, was already, with his family, the prisoner of the democrats. He and his Queen were frightened and with reason. In the previous year she had written to her brother the Emperor asking him to mobilize on the frontier in order to overawe the Revolutionaries. That brother and the King of Prussia, at a meeting to consider the Polish question, had publicly promised to intervene jointly and in arms. Moreover the French counter-revolutionary Emigrants had been allowed to organize an armed force on Imperial territory. On the other hand, when Louis had signed the new French constitution the Emperor had formally renounced the idea of intervention on the ground that its object—a government just both to King and people—was now achieved. After this, although Louis had written to the King of Prussia asking him to mobilize, neither Prussia nor Austria had done so.

At the same time the then dominant Revolutionary party, the Girondins, imagined a crusade to free the peoples of the earth—none of which were asking to be freed. The Revolution had already broken a European treaty by annexing the Papal town of Avignon. In April '92 the spirit was already present which in November would take form in a decree of the National Convention promising armed French aid to all nations desiring "Liberty." In general the Girondins, intoxicated with words,

believed their own mere enthusiasm capable of carrying everything before it. The conceited adventurer Brissot, who directed the Foreign Policy which the revolutionary parliament had forced upon the King, said, "War is a national benefit. The one calamity to be dreaded is that we should have no war."

Meanwhile the unhappy Louis as he signed the declaration of hostilities could at least console himself with the knowledge that all reasonable judgment agreed in expecting the Austrians and their Prussian allies to sweep the Revolution away like dust.

In the event both sides were mistaken; the war thus declared in 1792 was to last—with two brief and uncertain pauses—until 1815. It may be divided into four phases. In the first through 1792 and 1793 the French, much against their will, are on the whole forced to a defensive. In the second of two years from 1794 to 1796 they take the offensive with the idea of achieving the "natural limits" of France, i.e., the Rhine frontier. In the third from 1796 to 1812 they continue to attack, but now outside their natural frontiers, entering every capital on the continent from Madrid to Moscow. In the fourth from 1812 to 1815 they are again forced to a defensive, losing first their exterior conquests and finally suffering two successful invasions of France.

These twenty-three years of war form a single historic episode, the Revolutionary-Napoleonic. Attempts have been made to distinguish sharply between the Revolutionary and the Napoleonic periods, and indeed Napoleon's first army command in Italy in 1796 and his victories there marked the beginning of the third phase of the war with its wholly external conquests, but no such distinction destroys the essential unity of the whole. This unity, with Napoleon as the heir of the Revolution and a consolidator of its work, can easily be shown by non-military events and is conspicuously proved by the story of the wars. Napoleon fought the Italian campaigns of 1796 and '97 as the obedient servant of the Republican government, bound by detailed orders which with one exception he followed to the letter. Neither his subsequent rise to full power as First Consul of the Republic, nor his coronation as Emperor, checked the long struggle which went inexorably on. One might even

lump together the second and third phases in a single offensive period, on the ground that even before advancing beyond their "natural frontier" the French had already so outraged the conscience of Europe as to make a true peace with them impossible.

The first or primarily defensive phase of 1792 and '93 began with the disorganization of the French armed forces. The Navy never fully recovered. Although it had successfully stood up to the English fleet a few years before in the war of American Independence, it remained inferior throughout the period.

Turning now to the Army, at the outbreak of the Revolution the French regulars, nominally just under a hundred and eighty thousand strong, really had only a hundred and fifty-four thousand. On paper the militia numbered seventy-five thousand, bringing the total war strength to two hundred and twenty-five thousand; but since few militiamen had been drilled for fourteen years, the regulars were almost the only real soldiers. As in the other Eighteenth Century armies, the recruitment of the regulars was voluntary, and nearly all recruits came from the poorest and least settled of the population, many of them from the very dregs, so that the Army performed a valuable social function by absorbing and usefully employing those least fitted for domestic and civil life. The occasional fraud and violence of recruiting parties, of which democratic historians have made so much, bore only upon a few individuals, most of them little regretted by their fellows, out of a population of twenty-six million. There was an element of compulsion in recruiting for the nominal burden of militia service, for which men were usually drawn by lot as in the American "selective draft" of 1917 and '18, but Paris and a number of other important localities found their militiamen voluntarily by paying them. Moreover there was a generous system of exemptions.

The discipline of the regulars had been excellent and their non-commissioned officers efficient. But from the beginning the democratic politicians distrusted professional soldiers as the chief support of tyranny, and their efforts to revolutionize the Army naturally weakened discipline. Mutinies were frequent. By 1791 desertion and want of recruits had reduced the strength to a hundred and fifteen thousand.

The officers were all supposed to be either of noble blood or at least of families "living nobly." Large numbers—perhaps two-thirds—of them, hated as aristocrats and themselves hating the Revolution, emigrated. The proportion of emigrants was highest in the cavalry, the aristocratic arm of the service, next highest in the infantry, lowest in the engineers and artillery. The officers of these "learned arms" had to have a high technical education, were seldom of the higher nobility, and usually sympathized with the Revolution. Bonaparte, at first an ardent Republican, was a gunner, while Carnot—to whose name we shall soon return—was an engineer.

As political tension strained toward the snapping point, the Revolutionary government, distrusting the regulars, had to improvise new units. By all military standards of the time the attempt was hopeless. Today we are accustomed to huge, hastily raised levies, emergency armies expanded two and three hundred fold from a tiny nucleus. Very old people can still recall the improvised armies of the American Civil War, while those of England and America in 1914-'18 are still fresh in memory. For nearly a century and a half universal conscript service has emphasized the value of numbers, the one military asset which vigorous improvisation can always obtain, and of its nature democracy prefers quantity to quality. But as we have seen in the last chapter, almost all Eighteenth Century men thought differently, despising mere mass. There were indeed exceptions to the cult of quality. Here and there officers who had seen the straggling little campaigns in the distant, empty continent of America had noted the achievements as well as the defects of raw troops. Guibert, the chief French military theorist of the pre-Revolutionary generation, had prophesied victory to the first European nation to develop "a vigorous citizen soldiery." An industrious and reflective Captain of Engineers named Carnot had written: "Veteran soldiers are indeed precious, but a veteran is one who has made war. One who has only pirouetted on a parade ground for eight years is as new to the experience of war as one who has pirouetted for six weeks." In spite of these dissenting voices, military thought in general could appreciate only the long service professional soldier, the master of battlefields since the

decline of the Medieval feudal militias. As a matter of course Regulars were expected to conquer.

Indeed they would have conquered, and promptly, had there been a little more unity and determination in the anti-French coalition, or even one highly placed, energetic man who appreciated the gravity of the moment: or had the chance of war fallen differently in one of a dozen crises. But in any game, how difficult it is to keep on trying one's hardest against an opponent much weaker than oneself!

In addition to all this, the survival of the Revolution was in part due to the defects of the Eighteenth Century military system. Like the philosophy of that century, so also the technique of its armies, being human, had its faults. As our generation has discovered to its cost, these defects were as nothing compared with those of the system which was to follow, for Eighteenth Century war was supremely rational, while the present bankruptcy of the planet sufficiently proves the irrationality of our own democratic mass-massacres. Nevertheless the habit of considering war as a game played for prizes and not for the political life and death of states and peoples, a thing of skill rather than of brute force, a sparring match for points rather than for a knockout, made for slowness and undue caution in mediocre generals. By no means all commanders trained to limited war were of this sort. A time which saw the extreme boldness of men like Marlborough, Frederick, Wolfe and Suvaroff, as well as the rashness of Charles XII, cannot be universally charged with timidity. Nevertheless a part of the tendency toward slowness was inherent in the sort of war which insisted that soldiers must on no account injure or rob civilians, for that meant close formations, tented camps, and especially food supplies regularly issued from magazines. Moreover money had to be husbanded, inasmuch as law and custom curtailed the taxing powers of Eighteenth Century governments.

As with philosophy, politics, and strategy, so with tactics. The highly specialized Eighteenth Century method of infantry combat with its volleys fired by command, although formidable, suffered from the disadvantages inevitably accompanying extreme specialization. It demanded a strict alignment and dis-

regard of danger only to be obtained through the most perfect discipline, was unsuited to terrain not fairly smooth and open, and at best necessitated a slow approach march with frequent halts to rectify the line. Clearly this was not the only effective way of infantry fighting. In 1785 when the British General Cornwallis, fresh from his experiences against American marksmen, saw the last Prussian manoeuvres personally commanded by Frederick the Great, he said that the Prussian evolutions "...were such as the worst General in England would be hooted at for practicing." In the French army even before the Revolution Guibert had objected to the customary slow march cadence saying "...sixty steps per minute ... makes the march much too slow and painful to endure." It was epoch making when under his influence the cadence was raised first to seventy, then to the quick step of a hundred and twenty steps per minute familiar to soldiers of our own day.

The first phase of the Revolutionary-Napoleonic struggle is the almost miraculous saving of the French from complete military disaster.

The beginnings of French military improvisation were a mere chaos. Originally, as befitted a regime dedicated to liberty, volunteering was tried. The first batch of new battalions, raised in 1791, were bad enough but had at least six or eight months training before seeing active service, and had learned something from being brigaded with regular regiments. Moreover the abominable results of allowing them to elect their officers were somewhat tempered in the case of the battalions which chose men who had already served as officers or non-coms in the regulars or the old militia. Not a few able individuals thus rose to commissioned rank, among them some who like Jourdan had served in the Expeditionary Force sent to the United States in the war of American Independence. Nevertheless most of the new units began badly. Even less can be said in favor of the second lot of new battalions, those raised in '92. By this time the volunteer system was already beginning to break down, and where enough recruits did not come forward the required quota had to be filled by drafting men chosen by lot. The purchase of substitutes was permitted. Consequently bad characters and men too young, too old, or

not physically fit abounded. Of the levies of '92 the most disgraceful were the "Fédérés" or Federal battalions, to distinguish them from those raised locally by the different Departments. Even these sometimes elected old soldiers as their officers but not always with happy results to either side. Thus one battalion chose for their Lieutenant-Colonel Godart, a man of seven years service as private and Sergeant of Regulars who later rose to be a General and a Baron under Napoleon. But when he made them drill they tried to hang him as a "despot who despised Liberty and Equality."

Here and there flashes of military aptitude appeared. Indeed in a nation of high energy and military tradition it could hardly have been otherwise. Take for instance the famous Five Hundred from Marseilles who led the storming of the Tuileries palace on August 10, '92. These middle class volunteers left their southern city in the evening of July 2 after drilling for only three days under elected officers. Dragging two little guns with them by man power through the summer heat, they marched no less than five hundred miles at the astonishing rate of eighteen miles a day, entering Paris on July 30 with every single man present for roll call at the end of their dash! Anyone with the least knowledge of soldiering will be amazed at such a feat. Readers will remember their song, the "Marseillaise," and the almost delirious enthusiasm which filled the Revolutionaries of that time and most of all such a body as this, but enthusiasm alone cannot inspire endurance unless it be joined to real military gifts. Thus early in the struggle there were signs of that French talent for arms which was to create the armies of Napoleon. Further, we may safely assume that this admirable march was made without the usual Eighteenth Century encumbrances. The men can have had neither tents nor elaborate wagon transport. So small a body could usually be fed and lodged with ease en route by municipalities of their own political party.

Nor was the spirit of the "Marseillaise" wholly absent from the new levies or from the considerable remnant of the old French regulars. Eighteenth Century moderation was already miles away, and that famous song is as one sided as a Red Indian war chant. Its familiar words call the invading sover-

eigns tyrants and their disciplined soldiers savage beasts come to cut the throats of Frenchmen. The Revolutionary provocations, the challenge to established things, are forgotten and the purpose of the democrats is called purely defensive. But however false to truth, the democratic hymn has the military merit of being full of fight.

It remained to be seen whether the solid old regiments, together with the new spirit working upon the raw troops could halt the invasion.

For the moment the chances for a successful resistance seemed almost nil. The confusion and anarchy of France may be judged from this: had the regulars been up to strength and the new formations fully recruited, well over half a million men would have been with the colors. Of these over four hundred thousand would have been available for the critical north-east frontier between Switzerland and the North Sea. A careful and recent estimate is that only about eighty thousand actually held that frontier—in mere numbers not much more than a third of the Prussian army alone when that awe-inspiring machine should be fully in movement. As to quality, we have seen what most of the new French formations were. In Paris neither the War Department—sunk in graft and incompetence with no less than seven Ministers in sixteen months succeeding each other like Jacks-In-The-Box—nor any one else knew what units existed or had the least idea of how many men were present for service. One battalion consisted of twenty-seven officers and three men.

Moreover in 1792, if the dominant note of French military administration was chaos, that of the opening engagements was panic. The Austrian troops in what is now Belgium were extremely few, but again and again the raw French recruits fled headlong from handfuls of enemies or even from none. This tragicomedy was full of disgraceful incidents. On one occasion soon after the declaration of war a French detachment first advanced across the Belgian border, next retired before a small Austrian force, then fled suddenly for Lille. Arrived at that town, they began crying "treason," murdered three generals, and hung up the corpse of one by the heels. After several such episodes Lafayette, commanding the French army of the center

which alone outnumbered all the Austrians yet in the field, remained stationary. Next, after learning of the storming of the Tuileries palace on August 10th, the captivity of Louis XVI and the disgusting massacre of the Swiss Guards, he went over to the enemy.

Lafayette's army refused to follow him, but what chiefly saved the French in the early summer was that the Prussian and Austrian governments had been wasting time in debating whether they should make the campaign unselfishly or how they should indemnify themselves. Each kept one eye on the Polish question which remained active, with the Empress Catherine of Russia constantly sowing discord between Vienna and Berlin—as was indeed not difficult between these two old enemies.

Since the main Austrian forces arrived only in the following year, the principal Allied move of 1792 was the invasion of France by the Prussians. These last, although with the small Austrian forces already present they numbered a hundred and ten thousand against the French eighty thousand, failed through slowness and irresolute command, together with adverse chances of war. Their commander, the Duke of Brunswick, disliked the French Emigrants and sympathized with the administrative reforms which formed part of the Revolutionary program. The Prussians opened the campaign late, entering France only on August 19. With a deliberation typical of Eighteenth Century war at its worst, they would halt until six days supply of bread for their men had been baked, then advance, then halt again for another baking when their supply wagons were empty. On the other hand, their manner of attacking towns was contrary to the humane Eighteenth Century custom of sparing civilians, for they bombarded not fortifications but houses, in order to terrorize non-combatants as a certain school of thought advises the aviators of today to do. Against the disorganized French of 1792 this "frightfulness" caused the prompt surrender of the fortress of Longwy and then of the great fortress of Verdun.

The raw French units which comprised a considerable part of the defending field army were still subject to frequent panics. Amusingly enough, one disgraceful incident involved three fu-

ture Marshals of France. The chasseur regiment in which Sergeant Murat served began it. The infantry battalion in which Jourdan was Lieutenant Colonel was dragged along by the fugitives, while Captain MacDonald, an aide-de-camp to the Commander-in-Chief Dumouriez, seconded his General as the latter rode into the fleeing mob and beat them into obedience with the flat of his sabre. Nevertheless the vigor of the French High Command did much to hold the unsteady troops to their work.

The one action of the campaign, Valmy, can hardly be called a battle. The French concentrated about thirty-six thousand men, the Prussians slightly less. Nor were the defenders hopelessly inferior in quality, for they were stiffened by a considerable proportion of old regular units while many of the invaders—although sufficiently drilled to move with the stiffness characteristic of the Prussian service—were peasant conscripts hastily recalled to the colors. Moreover many of Brunswick's men were weakened by dysentery caused by insufficient supply due to roundabout communications and by bad water.

On September 20 Brunswick advanced to about fourteen hundred yards from the French position, and at what was then long gunshot range an artillery duel began. After some hours the invading infantry again advanced to about twelve hundred yards from the defenders—the approximate distance is fixed by a number of contemporary estimates made on both sides—and again halted. Here they were still eleven hundred yards out of the effective range of the smooth-bore muskets of the day, so that nothing could be done but more cannonading. Late in the afternoon, after insignificant casualties of three hundred for the French and less than two hundred for the Prussians, the latter returned to their original positions.

Here for a week the Prussians stood still, with their sick list from dysentery steadily mounting while reenforcements arrived for the French. Negotiations were then begun for a peaceful retreat of the invaders, and without firing a shot the proud army which was to have swept away the Revolution shamefully recrossed the frontier.

Given the fiery French temperament, the tension of the

moment, and the universal expectancy of disaster, the effect of Valmy was electric. The triviality of the almost bloodless engagement—"that insignificant cannonade" as a famous writer afterwards called it—made no difference. It was enough that the Sons of Liberty, deprived of their King whose traditional function it was to lead them in war, had met the Prussians and had stood fast. Two days after Valmy the revolutionary Parliament formally deposed Louis XVI, who had been closely imprisoned since the storming of the Tuileries, and proclaimed a Republic.

Among the first acts of the new government was the invasion of Belgium. Within seven weeks of Valmy the small Austrian field army there, entrenched at Jemappes near Mons and gallantly led but numbering less than fourteen thousand, was beaten from its positions by the powerful artillery and overwhelming numbers of forty thousand French. There had been trouble between the devout Belgians and the atheist policy of the late Emperor Joseph II, who had dismantled the Belgian barrier fortresses lest they should serve the inhabitants against him. Consequently Jemappes for the moment decided the fate of all Belgium. Even part of Holland, feebly defended and indeed hardly defended at all, was invaded. Meanwhile east of the Ardennes the French pushed northward to the Rhine, occupying Mayence and crossing that river to take the important city of Frankfort. In Paris the enthusiasm of the convinced Revolutionaries knew no bounds. Before November 1792 was out the French National Convention decreed that France would grant succor and fraternity to all nations desiring liberty. The Convention also offended England by proclaiming the free navigation of the Scheldt.

All this however was a mere fire of straw. As yet the old order had put forward only a fraction of its available force. The real trial of strength was still to come, with the chances as much against the Revolutionaries as ever. As if to exasperate their foreign quarrel, in January 1793 they executed the King. Throughout Europe the ruling classes, now thoroughly frightened, decided for war.

The decisive campaign of the French defence opened in the last days of February. The new Austrian Commander-in-Chief

Coburg—his full name was Prince Frederick Josias of Coburg-Saalfeld—with Colonel Mack who was thought the ablest Austrian officer as his Chief of Staff, and with the young Arch-Duke Charles as one of his subordinate commanders, had collected about forty thousand men, most of them hardened by long campaigning against the Turks, in the region of Cologne. Moving westward between the Ardennes and the Dutch frontier on the same general line followed by the German right wing in 1914, he easily drove the French before him. By this time the Belgians, thoroughly disgusted by the wholesale looting of the undisciplined French troops, had discovered that the Republic was more fiercely anti-religious than the Austrian government had ever been. Just after the middle of March Dumouriez, hastily recalled from Holland, risked an action east of Brussels at Neerwinden, lost it, despaired of the Republic and went over to the enemy. Everywhere the French fell back. Their volunteers deserted wholesale, still bellowing their patriotic songs as they left for their homes! Just before the beginning of the defeats the Republic had declared war on England, Holland and Spain.

Since the collapse of the Revolution would certainly mean their own deaths, the French democrats in desperation took the one possible remedy: dictatorship. On April 6, '93 the Convention decreed a Committee of Public Safety with dictatorial powers.

The new dictatorship found at its disposal the beginnings of what was to become a formidable military instrument: compulsory service. Late in February, just as the storm was about to break, the Revolutionary government had sought to increase the numbers of its armies by voting to draft three hundred thousand men. Although the principle of voluntary enlistment was thus abandoned, that of universal liability for service was still modified by permitting the drafted men to purchase substitutes. The imperfections and disadvantages of the measure were clear enough. Like the semi-volunteer enlistments previously voted, it brought in many worthless men and boys. Moreover the attempt to apply it in the Vendée, the district on either side of the lower Loire, was to provoke the most serious of the many internal revolts of 1793. Nor is it certain how

great was the increase in numbers given by the levy; the official figures—just over two hundred thousand with the colors in February, nearly four hundred thousand in May, and over four hundred and eighty thousand in mid-July '93—are so inaccurate that only the wildest guesswork can estimate how far from truth they are. Nevertheless a paper increase of two hundred thousand, a number equal to that of the entire army which it was to reinforce, and that within two months, for the draft was not begun until March, remains formidable even if reduced to a fraction of the original figure.

The necessary time for the new numbers and the dictatorship to take effect was to be granted.

The Allied plan of campaign was for Brunswick's Prussians and an Austrian force to take Mayence and then move forward into France between the Rhine and the Ardennes. Meanwhile Coburg with the main army, between the Ardennes and the Sea, chiefly Austrian but including English and Dutch contingents as well as troops from some of the smaller German states, was not to advance too far until Mayence had fallen. Coburg liked the war little better than Brunswick. He also feared to be the cause of Queen Marie Antoinette's death, and spent some time in semi-secret negotiations with the French when he should have been pressing the campaign. Nevertheless he was not quite so slow as to wait for Mayence to surrender, for the siege lingered until July 23. Early in April the French army of the Rhine had been driven far back and Mayence blockaded, so that the allied Commander-in-Chief found himself free to besiege the French border fortresses in his front which he must take before advancing on Paris; to advance leaving them untaken in his rear would have exposed his communications to sorties of the garrisons. Like all Generals commanding armies supplied from magazines in the Eighteenth Century manner, he was much concerned both about communications and expense. At such a distance from Vienna an Austrian concentration on the French border cost as much as a campaign. Since the Belgian fortresses, as we have seen, had been dismantled, to save the hire of carts and carters he must seize a strong place in the zone of operation for a local market and depot for supplies. How far his delays were inevitably caused by the time

required to bring up heavy siege artillery, and how far they were due to his own slowness is difficult to say. Since all educated soldiers on both sides agreed that he had the game in his hands there seemed no need to hurry. Accordingly the French frontier strongholds, although in poor condition, were enough to delay the invasion. Condé, the first place attacked, surrendered only to starvation on July 10. Valenciennes fell on July 28. Meanwhile the French field armies could accomplish nothing.

As if invasion from without were not enough, the Republic had also to meet internal revolts. The principal cities in the south rose, and whole districts in the west, the insurrection in the Vendée being particularly serious. The democratic leaders met each rebellion with the utmost energy but it seemed hardly possible that the Republic could survive.

On the critical northern frontier the fall of Condé and Valenciennes left a gap forty-five miles wide in the line of French border forts between Lille and Maubeuge, narrowed only by the small work of Le Quesnoy near Maubeuge. At the end of July 1793 Coburg might have "masked" or "contained" the fortresses still holding out, that is surrounded each with enough troops to prevent the garrisons' taking his provision trains while he advanced on Paris. Or, if he thought the gap still too narrow, the strategic thing to do was to attack either Lille or Maubeuge. When he had taken one or the other he could advance upon Paris with his rear secure.

Instead a particularist English motive caused a diversion on Dunkirk on the extreme French left and about twenty five miles northwest from the town of Ypres, since famous in history. Seeing in French affairs only a welter of anarchy, each allied government had begun to think of what it might fish for itself from these troubled waters, and the English desired Dunkirk as a foothold on the continent. Coburg would have preferred to keep their troops with him but made little objection to their going. He even lent them some eleven thousand Austrians, bringing the numbers of those about to attack Dunkirk to about thirty seven thousand, just over a third of the whole allied force which was now a hundred and eighteen thousand.

The operation against Dunkirk opened well enough. The leading elements easily brushed aside the French detachments which they met in their march towards the place. In one engagement the British Brigade of Guards found themselves opposed by a unit of puny French boys whom they "... cuffed and jostled... like a London mob, without condescending to kill them." Such incidents doubtless made the Allies think the Revolutionary troops negligible, which was going just a little too far. French soldiers are notorious for their variability of valor for good as well as for evil, and on this occasion the sequel was to prove them by no means wholly worthless.

Arriving before Dunkirk the Allied command committed three grave errors. First, finding their numbers insufficient to surround the place, they contented themselves with attacking one side of it and detached only two fifths of their strength as a covering force. Next the commander of that covering force, having only about fourteen thousand men, dispersed his command over a front of more than twenty miles! Worst of all, he unnecessarily abandoned direct communication with the besiegers by voluntarily giving up an essential post on a raised causeway which connected him directly with the Allied main body, thus condemning his comrades, if they wished to support him, to do so by a great circuit of about twenty miles to the rear around a large marsh.

Against such dispositions even the raw French levies of September 1793 were dangerous. Their concentration was not energetic; although nearly eighty thousand Republican troops were within a few days march, not much more than half of these were collected for the coming action. These however were enough to oppose many of the isolated little Allied detachments with a local superiority of ten to one. When the French advanced, it speaks volumes for their low military quality and for the disciplined steadiness of those detachments that most of the latter were able to retire slowly and intact, concentrating between nine and ten thousand men, chiefly Hanoverians and Hessians, near the village of Hondschote. Encouraged even by their small measure of success, Revolutionary forces outnumbering them by more than two to one here attacked them.

The action was decided in favor of the French chiefly

through a tactical novelty. At first the Allied regulars, standing elbow to elbow and firing volleys at command as they had been taught to do, were able to stand against the heavy odds. But presently they found themselves opposed by a new infantry tactic with which their training had not taught them to cope. Under fire the raw French levies could not be got to march or stand in regular lines as the Eighteenth Century fashion demanded, and as their officers tried to make them do. They would scatter. But when they scattered, all of them did not simply run. Democratic enthusiasm, natural combativeness, and that native aptitude for arms which we have seen in the extraordinary march of the men of Marseilles and their storming of the Tuileries palace in the previous summer, now combined to keep some of them to their work before Hondschoote. Moreover the French were and are a nation of poachers, many of whom are familiar with firearms. Wishing to kill without being killed, combative individuals took cover and fired at the excellent targets afforded by the Allied mass before them, much like Red Indians and American Revolutionaries in the forest fights of their empty continent. Indeed there may have been an element of American memory in the new method; Lafayette afterwards claimed to have taught skirmishing during his brief tenure of command, and not a few French officers who had served west of the Atlantic must at least have recognized what they saw before them. Also the example of the wild Croats in the Austrian service may have counted.

At all events the many hedges and ditches of Hondschoote favored the skirmishers. The allied regulars, firing their unaimed volleys, had almost no target. When they advanced in the slow Eighteenth Century fashion they could not close with their annoying opponents, for these last were free to run nimbly back to the next hedge or ditch, there to begin firing again. Seeing the combined immunity and effectiveness of their braver comrades, more of the French plucked up courage to take a hand in so good a game. By the afternoon, the allies, having inflicted about twenty three hundred casualties on the Republicans, and having themselves suffered approximately an equal loss—about a quarter of their force present on the field

—fell back unbroken but defeated. There was no pursuit, for the raw French units were in the confusion customary with such troops after action. Nor did the besiegers of Dunkirk try to retrieve the day. They retired unmolested, leaving behind their siege artillery. The allied operation against Dunkirk had failed, and the ill-organized Revolutionary forces had scored a success.

Hondschoote had shown the victors to be still gravely inferior in military quality. There is a story that some of them, taking cover in a ditch, had called to the enemy: "Don't shoot, there are people here." Also, the new skirmishing tactics, however successful on strongly enclosed terrain, were by no means a cure-all. Within a week, at Avesnes-le-Sec, two thousand Austrian cavalry without a single gun routed seven thousand French of all arms, killed and wounded two thousand of them and took another two thousand, together with twenty cannon, with loss to themselves of less than seventy men. Moreover the French commander Houchard, in spite of his gallantry and his record of long and honorable service, was relieved of command and guillotined for failing to pursue after Hondschoote. Since Dumouriez' treason in April the principal French army, that of the North, had lost four commanders, Dumouriez' successor having been guillotined like Houchard and two others having been killed in action.

But meanwhile the work of the Committee of Public Safety was beginning to bear fruit, not only because of its dictatorial authority but also because it had raised Carnot to power. A Burgundian of good middle class family, he was an accomplished soldier whose independence and vigor in pushing his individual military opinions had delayed his promotion, so that now, at forty, he was still only a Captain of Engineers. An austere, dedicated man, his astonishing industry and power of concentration were driven by a consuming passion for the Revolution which he served.

On August 12, '93, the day before the slow, Allied march upon Dunkirk began, the Convention had hesitated over the proposal for a levy in mass. On the 14th Carnot entered the Committee of Public Safety. On the 16th the levy was enthusiastically decreed, and on the 23rd the decree was elaborated

into that law for the "permanent requisition of all Frenchmen for the defense of the country" from which the opening paragraphs of this chapter are quoted. There were to be no more substitutes. As in barbarous tribes, every valid man was to be a warrior. Within little over four years on the meeting of the revolutionary parliament, Rousseau's impossible dream of heaven on earth, adorned with pastoral landscapes full of Dresden china shepherdesses, had re-created the armed horde. The democratic politicians, frantically seeking a military instrument to save their work and their own skins, had let loose the devil of "totalitarian" or "absolute" war.

The mood in which men dedicated to "Liberty" perpetuated this greatest possible assault upon the real liberties of mankind is worth noting. If the amiability of the early revolutionary honeymoon had gone, its optimistic enthusiasm remained. The official reader of the bill went on: "All citizens are indebted to Liberty. Some owe it their labor, others their fortune, . . . all owe it the blood which flows in their veins." The Deputies cheered him to the echo, asked to have it read the second time, and cheered again. "Thus" as the English historian Toynbee remarks "at one stroke of baleful magic the French state was transformed from a public utility into a goddess." He might have added "a goddess which required unprecedented numbers of human sacrifices." How far outside the armed forces the vast machinery of compulsion was to go we shall see.

Returning to the campaign of 1793, Carnot from his entrance into the Committee of Public Safety acted not only as minister for war but also as Commander-in-Chief of all the armies. Especially he saw that, given the French national character and their increasing but still undisciplined numbers, the best chance was to attack continually. To attack in mass, his son tells us, was not peculiarly his idea; it was a slogan heard here, there, and everywhere. But at least he fully agreed, and was constantly urging his generals forward. He had been present at Hondschoote, the decision to attack there had doubtless been partly his, and he had seen the usefulness of the swarming skirmishers.

Late in September as the first recruits and supplies produced by Carnot's great levy began to come in, Coburg undertook

what was to be the decisive operation of the war. Reenforced by the return of most of the units which had unsuccessfully attempted Dunkirk, he took Le Quesnoy, and laid siege to the fortress of Maubeuge. He did not concentrate energetically. By this time the Allied troops were now well over a hundred thousand, Jomini puts them at more than a hundred and sixty thousand—which may have been their paper strength—and their real strength may have approached a hundred and thirty thousand, of whom less than half were now used. The Allies' superiority in military quality was still so great that success seemed certain; some twenty six thousand of them were thought enough to contain the twenty thousand who garrisoned Maubeuge, while thirty seven thousand posted themselves only six or seven miles to the south as a covering force. They were there dispersed by their commander after the fashion of the day until he had only twenty one thousand, perhaps even less, immediately under his hand.

With Condé, Valenciennes, and now little Le Quesnoy gone, Maubeuge was vital to the French. Its fall would free Coburg's rear for the march on Paris which would end everything. Everywhere the war trembled in the balance. In the east near the Rhine the Prussians were attacking the entrenched line which covered the northern boundary of Alsace. In the west the Vendée, and in the south the great naval port of Toulon were still in revolt. As far as those on the northern front yet knew, Lyons, the second city in France was also holding out against the Republic. At any cost therefore Maubeuge must be relieved.

It is disputed how far the coming French operation was actually planned and carried through by Jourdan, now commanding the Army of the North, how far by Carnot himself who was present. The French concentrated over forty four thousand men from a front of nearly a hundred and forty miles. Although certain important and available bodies were not summoned, the move left so much of the frontier comparatively unguarded that both Carnot and Jourdan were momentarily denounced as traitors for withdrawing the garrisons from so many towns. The idea of the great Napoleonic concentrations which were to follow now begins to appear. Nor would the

speed of the thing have been unworthy of the Emperor: certain units trudged more than seventy miles in only three and a half days!

The French forty four thousand, supported by what an English officer who was present called "an immense artillery" and outnumbering the Austrians who covered the siege of Maubeuge by more than two to one, now attacked the latter in an action called after the village of Wattignies. On the first day they were repulsed. A temporary and local success on the left was broken by a charge of the superior Austrian cavalry—the new Republican troops, although some could already march well, failed to rally or form square quickly enough to meet a sudden rush of horsemen. In the night, however, either Carnot or Jourdan waked some six to eight thousand men on their defeated left and moved them eastward behind the French line through the darkness until they far overlapped the Austrian left near Wattignies village. The move was a gamble, for it might not have been possible to get the tired young troops to attack at all. The Austrians might then have swept away the weakened French left and all might have been lost. In the event the ill-disciplined boys, far superior in numbers, charged not once but three times, carrying Wattignies and rolling up the Austrian line.

The victory was not crushing. Exhaustion forbade pursuit, and on the third day Jourdan expected an Austrian counter-attack. He was saved by the refusal of the Dutch commander to join in such a move. Coburg therefore raised the siege, drew off in good order, and went into winter quarters. With the relief of Maubeuge the greatest peril of the Republic was past.

During the Maubeuge operation the conduct of the French troops was, as usual, spotty. The assaulting units on the second day showed real constancy and fighting spirit. In particular there is the excellent story of a little drummer boy captured by the tall Austrian grenadiers and ordered by them to beat the retreat in order to discourage his comrades. Instead he beat the charge to encourage those comrades with the hope that Republican troops had already gained the Austrian rear—and was killed for his pains. Long afterwards the heroic episode was confirmed when the bones of a boy were found there,

mingled with the skeletons of much taller men. On the other hand a detached column on the extreme French right which indulged in a series of farcical panics would have been cut to pieces but for the good conduct of some cavalry who covered their disgraceful flight.

Before the new year dissension between Austrians and Prussians had ruined the Allied campaign in Alsace. The revolt of the Vendée had been stamped out except for guerrilla fighting, and the southern revolts put down. In particular the great naval port of Toulon which had received an Allied fleet and garrison, had fallen, a good share of the credit for its fall having been gained by a twenty four year old major of artillery, Napoleon Buonaparte. Notwithstanding losses, there were now nearly six hundred and thirty thousand men on the French army lists, of whom over five hundred and fifty thousand were supposed to be serving with the colors. The chaos in the army returns was being gradually reduced to order, so that after allowing generously for continuing inaccuracy, still the tormented Republic had far exceeded the numbers of Louis XIV at the height of his power. The tide was about to turn.

The methods of war had changed as greatly as its scale. We have already noted the new skirmishing tactics of the French infantry. In addition the mechanism of command, the personnel, and the supply system were transformed. The new numbers and their loose organization made it impossible to march, manoeuvre and fight an army as a unit under a single commander. The enforced semi-independence of subordinate commanders produced the divisional system, with each division a self-contained unit cooperating with its neighbors but remaining always an administrative and tactical unit able to operate alone if need be. The officers were no longer exclusively aristocrats. Many were still so; Napoleon and nine of his twenty five future Marshals had held commissions before the Revolution and were therefore at least technically noble. But many were not: in June '91 ten future Marshals were or had been enlisted men, and six were still civilians. Given success and good fortune, all officers might look forward to skyrocket promotion, while generals and especially army commanders operated under the shadow of the guillotine. Jourdan, ex-ranker, linen-draper,

pedler, and small town haberdasher, became a National Guard Captain in '90 and a Lieutenant-Colonel in '92, commanded the chief French Field Army, the "North," in '93. Had he lost the Maubeuge operation he would doubtless have lost his head with it. Almost all enlisted men were now raw boys new to soldiering, ignorant alike of the rigid discipline of the old armies and of the care which those armies had taken of their men.

As to supply, in spite of the savage measures of coercion attempted on the home front to which we shall come in a moment, the distracted France of '93 could not regularly feed her troops from magazines, nor had the commanders the necessary control over their men to restrain them from plundering right and left. In one of many thousand instances, late in August '93 some French troops occupied the French town of Tourcoing—and promptly dispersed to loot the place, levelling their muskets at their own generals who tried to stop them and shouting that the inhabitants of Tourcoing were aristocrats who must be despoiled! The wholesale looting set the inhabitants of occupied regions against the Republicans; we have seen its effect in facilitating the Austrian reconquest of Belgium. Moreover in poor districts the troops hungered no matter how diligently they stole. So also they often suffered from exposure due to the lack of tents. But at the same time these deficiencies had compensations. The very want of magazines, regular supplies, and tents helped toward that mobility which was the chief asset of the early Revolutionary army. Up to a certain point hardships toughen a man; Napoleon called them the school of good soldiers. Experience was to prove that they could be overdone—but the Russian campaign of 1812 was still far in the future.

Coincidentally with the changed scale and methods of war, its spirit was wholly altered. Already we have touched upon the original revolutionary enthusiasm, or, if you prefer, the revolutionary frenzy, in connection with the "Marseillaise." Now however the democratic politicians had learned to excite the combative passions of their young soldiers by what we would call today systematic propaganda. This startling innovation is vividly pictured by the hostile pen of a French

Royalist, Mallet du Pan, who calls the method a "...hellish tactic, ...worthy of the monsters who had invented it." Noting first the natural vivacity of the French, he goes on to describe how before every major operation the troops are worked upon by political speakers familiar with every trick of revolutionary oratory. Meanwhile selected agents circulate among the crowd, encouraging the more furious and stirring up the lukewarm until the air rings with cheers for the Republic and curses against Kings. Next women, "or rather Furies," serve out brandy in floods, and finally warlike music stirs up everyone almost to insanity. Accordingly "...fifty thousand savage beasts, foaming at the mouth with rage and yelling like cannibals, hurl themselves at top speed upon soldiers whose courage has been excited by no passion."

On the French side the struggle thus carried on was no longer a carefully calculated game of skill but in part a wholesale looting expedition, in part a war of doctrine, virtually of religion. It is at once the strength and the tragedy of the democratic movement that the idea of equality—political yesterday, economic today—can inspire religious enthusiasm. Bloody parody though it be of the Christian and Catholic doctrine of spiritual equality, to its devotees it is a god. Point out its follies and crimes and those devotees monotonously answer "Equality is right."

Since between absolute right and wrong, between God and Satan, there can be no compromise, any war of doctrine is savage. Naturally the devout and ignorant peasants of the Vendée, seeing their religion attacked and their sons dragged off by the conscription, were not gentle to their prisoners. What is astonishing to us is the furious fanaticism of the Republicans. Here are some extracts from one of their generals, Westermann, in the Vendée: "I have crushed the children under the hoofs of the horses, massacred the women who ... will breed no more brigands. I have not a single prisoner with which to reproach myself. I have wiped out all. ... The roads are strewn with corpses. ... We take no prisoners: it would be necessary to feed them with the bread of Liberty." Such words reconcile us to at least one of the Revolutionary guillotins, that of Westermann himself who was executed with

Danton in April '94. On the other hand it has been defended on the ground that only in this way could a French general of '93 best cover himself against accusations of treason! Over a quarter of a century ago the young Belloc, in general an admirer of the Revolution, wrote: "The reprisals against the rebels varied from severity of the most awful kind to cruelty that was clearly insane."

Certain decrees of the Revolutionary government speak for themselves; they ordered all French emigrants taken in arms against their country, all English and Hanoverian soldiers, and all English sailors to be killed. Greatly to the honor of France, her naval officers and sailors seemed never to have obeyed. Her generals did so seldom and usually much against their will. The French rank and file were all for mercy. Once when sending some prisoners to the interior they suggested that the members of the Convention might eat them if they liked! Consequently the Revolutionary wars, vast and bloody though they were, very seldom fell to the depths of horror which disgust us in the Seventeenth Century Wars of Religion.

The appalling thing about the whole Revolutionary-Napoleonic struggle was neither the torturing of prisoners indulged in by Vendéans or later by Spanish guerrillas, nor the rare massacres unwillingly committed by French soldiers in obedience to the cruel orders of the Convention; it was the intensity of the conflict combined with its scale. Fighting for quasi-religious ideals and their own lives, and armed with the conscription, the democratic politicians cared nothing for the lives of French soldiers if only the cause could triumph. The next batch to be drafted would be just as good. Consequently the Republicans could afford to attack constantly and in mass. That their losses exceeded those of their opponents did not matter. Democracy had made men cheap.

All this meant an enormous extension of governmental authority. The hitherto unknown tyranny of conscription had to be enforced by ferocious penalties. Those failing to report when called were treated like deserters who had voluntarily enlisted and then had broken their contract. They were punishable by ten years in chains, their property was confiscated and their parents punished with them. Later they were out-

lawed and condemned to death like the Emigrants, and their parents and grandparents made liable to imprisonment as suspects. Nor could the coercive machinery stop with the armies. Notwithstanding the wholesale confiscations of the property of the clergy, the Emigrants, and those guillotined and deported, the Revolutionary government was bankrupt. Consequently legal force had to be used against the civil population as well. The personnel of the essential industries working directly for the armies were the objects of special attention; to arm, clothe and shoe the myriad of recruits all the gunsmiths, blacksmiths, locksmiths, tailors and shoemakers were summoned under penalty of jail sentences, installed in squads in the public buildings, assigned fixed tasks, and forbidden to make anything for private clients. Under penalty of a fine, every shoemaker was bound to deliver a certain number of pairs of shoes every ten days. Nor could the process stop there, for with all society in turmoil the cities were threatened not only with want of fuel but also with famine. To meet such a danger everyone connected with the production, transport and sale of food or firewood was "requisitioned" on pain of three days in jail. In some districts at harvest time the entire population was called out to get in the crops.

If in practice all this was not so systematically done as in wartime today, that was not the fault of the Revolutionary politicians who lacked our rapid communications—railroads, motors, planes, telegraphs, telephones and wireless—and were ruling a people unaccustomed to despotic control. Today we are broken to such oppressions, but in 1793 no previous tyrant had ever so attacked the real liberties of free men as did this government dedicated to "Liberty."

The all-devouring totalitarian state was invented not by the dictators of today but by the democrats of the first French Republic.

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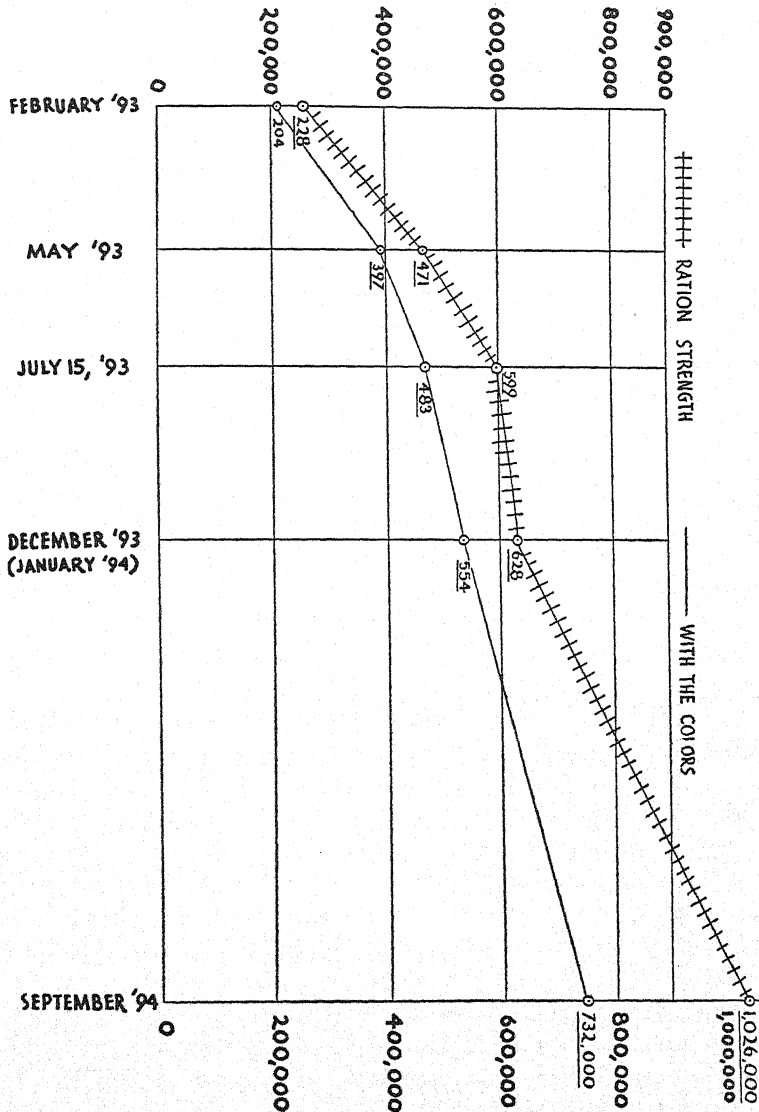
After the passing of the greatest peril to Revolutionary France toward the end of '93, there followed an indeterminate period of a few months like the slack-water between two tides. The conscription was continually increasing the Revolutionary

armies which were also beginning to improve in quality. Incompetent officers were being weeded out, able men were rising in rank. The new masses were learning the rudiments of discipline. Although the Allies between the Ardennes and the North Sea, still the better soldiers, had been reenforced to a hundred and sixty thousand of whom about a quarter were immobile in garrisons, the Republicans opposed to them were now superior in numbers roughly in the proportion of three to two.

Nevertheless in April '94 a bad French blunder gave the Allies still another chance of winning the war at the battle of Tourcoing. A force of about thirty thousand in the left center, having advanced and taken the towns of Menin and Courtrai against slight opposition, were left standing in a dangerous salient some sixteen miles deep in advance of the French general line. These thirty thousand the Allies planned to destroy, that is to "destroy" them in the military sense of breaking their organization and cohesion. About sixty five thousand men, over half of the Allied field army, were to cut off the new salient.

Very briefly, the Allies were defeated because of the slackness—in one case perhaps also the indisposition—of the commanders of their wing columns. The failure of these columns to advance briskly gave the French in the salient a chance to turn the tables. The local Revolutionary commanders, quickly grasping the danger, reacted promptly and energetically. Using the marching power and the ability to do without sleep which we have already noted in the revolutionary troops, and bringing up all available units, they were able to throw forty thousand men on twenty thousand of the Allied center. Again the high military quality of the imperiled Allied units permitted them to draw off without complete disaster, but they were roughly handled and lost heavily while the Republicans scored still another success. An English officer speaks of the "French skirmishers, sharp sighted as ferrets and active as squirrels," infiltrating any gap in the Allied formation.

Before the end of May the French had fully reoccupied their own territory, and before the end of June seventy three thousand of them had beaten fifty two thousand Allies on Belgian soil at Fleurus. Had the Revolution been fighting a purely



GRAPH OF FRENCH NUMBERS
(based on graph in Carnot's Memoirs)

defensive war its leaders might now have proposed peace. Such an offer, however, would have been alien to so fierce a struggle. Hatred was running too high. At the same time, since no war can be altogether a matter of mere hostile feeling but all must have some political purpose, the Republicans had decided to round out French territory to their "natural frontiers," that is to annex the entire left bank of the Rhine.

To this end their victorious troops reoccupied Belgium and overran Holland. By September '94 their army lists carried over a million names, of whom nearly three quarters were with the fighting units. Such an armed horde had never before been seen in modern times, and seldom on earth since the days of Xerxes.

On the first of June '94 the English fleet, now greatly superior both in seamanship and gunnery, destroyed a French fleet and achieved a command of the sea which was to prevent any French invasion of England during the entire period. Nevertheless, after the French land successes of the year, Prussia and Spain made peace, while England withdrew her army from the continent and stopped paying subsidies to her allies; leaving only Austria to carry on the land war with the half hearted support of Piedmont.

In '95 the Revolutionary parliament, on motion of Carnot, formally annexed Belgium. If you do not do so, said Carnot, then you will be able to show the French people no reward except Liberty for all their efforts and sacrifices. And Liberty, as he implied, would not seem enough.

Whether the annexation of Belgium alone, or even that of Belgium and the left bank of the Rhine would have made permanent the quarrel with the old order in Europe we shall never know. Holland had already been made a Republic dependent upon France. Not a few historians have held that England could never have felt secure with Antwerp in the hands of a great power. Others have noted that in 1803 quite different provocations led the British to renew the war. Certainly neither Belgium nor the Left Bank would have been held back from assimilation with France by any strong national feeling. At all events the Republic was soon to engage in far vaster adventures.

For good or ill, the Revolution itself was a vast adventure. Like all its major ideas, the cult of thrills was inherent in Rousseau's contempt for reason and moderation as compared with instinctive emotion. Moreover such a series of novel and striking events enormously stimulated the imagination. In so extraordinary a time the humdrum laws of probability seemed abolished. Who could tell how far successful men or a successful nation might go?

* * * *

In 1796, only two years after the reconquest of French territory, France was to find herself involved far outside her natural frontiers. In that campaign Napoleon, who was henceforward to carry the burden of the unending struggle, first commanded an army.

By this time the hard blows of the continual fighting had forged the French army into an admirable instrument of war. Its officers were now tested natural leaders. Its men could be counted on to fight hard and to march faster than any enemy.

Given such an instrument, together with his own high talent, the "sallow, fiery, little Corsican" would go far. A poor young nobleman, he had been fitted by a good military education to handle in a new fashion the powerful weapon placed in his hands. Moreover in addition to formal schooling in his profession he had digested the advanced military thought of his day, thus preparing for his future victories by learning from men and books today known only to historical specialists. Himself an artilleryman, he had learned from du Teils the possibilities of concentrated artillery fire by contrast with the usual Eighteenth Century practice of using guns as "accompanying weapons" spaced out among the infantry. In the pages of Guibert he had studied the effectiveness of mobility. The writings of Bourcet had taught him how to puzzle an opponent by seemingly disconnected moves which in reality could be quickly combined.

Much has been written of the intensity of his will, the rapidity and accuracy of his mind. For us the essential things are: first that he had inherited the Revolutionary army and was to

develop the new art of war which that army had begun, second that he like the other Revolutionary leaders wholly failed to understand the nature of peace. Neither he nor they saw that a true peace must be either one of reconciliation or one of destruction, since an unreconciled enemy still possessed of the power to strike will do so at the first opportunity. Especially he and they thought it clever to break the Eighteenth Century rules of war because they missed the secret of those rules, i. e. the moderation which alone can reconcile an undestroyed opponent to defeat. The world still suffers from this stupidity.

Returning to our narrative, at the outset of the campaign of 1796 the Revolutionary machine was running down. The Republican government, now under five Directors of whom Carnot was one, was at its wits end for money. Throughout France the enthusiasm of the earlier years was waning. The Royalist and Catholic opposition was gaining strength. The Directory, of which the members had personally survived the repeated killings of leading politicians, was unable to keep up the numbers of its armies, and was anxious for peace. In those armies, however, and there alone the Revolutionary spirit was still running high. The great bulk of the French forces, like that of their opponents, was in Germany where in 1795 an indecisive campaign had been fought along the general line of the Rhine. On the Italian frontier a smaller French body, having occupied the Piedmontese territories of Nice and Savoy and thereby rounded out French territory to its natural southeastern frontier the Alps, stood with its back to the Mediterranean facing a joint Austrian Piedmontese force in the difficult country of the Italian Riviera.

Both to France and to her enemies the Italian theatre was subordinate, but the Directors thought that something might be done there, especially since Piedmont was obviously anxious for peace. The natural frontiers, they hoped, might be established by advancing beyond them. The twenty seven year old Napoleon was given the Italian command under detailed orders first to take the Piedmontese fortress of Ceva which covered the best road from the Mediterranean into Piedmont, then to compel or persuade the government of that country to a separate peace, finally to occupy the Austrian duchy of Milan as a sort

of hostage or bargaining asset in negotiating the greatly desired peace with the Emperor. There was even an element of absurdity in these orders, for on the one hand the young general was to take the Piedmontese strongholds early in the game, and on the other hand he was not to risk his heavy artillery in laying regular siege to them until all danger of losing that valuable material to a counter-stroke of the hostile field armies was at an end—a condition practically impossible to fulfill.

Nevertheless the new commander took hold vigorously, inspiring his ragged and frequently unshod troops with an effective mixture of the crusading temper, the love of glory, and the love of plunder.

The numbers involved have been most variously stated. Bonaparte himself seems to have had over forty thousand men, the Piedmontese in his front may not have been much more than fifteen thousand, the Austrians perhaps thirty thousand.

The latter were commanded by Beaulieu, seventy years old but a hard fighter who had nearly defeated the French at Fleurus about two years before.

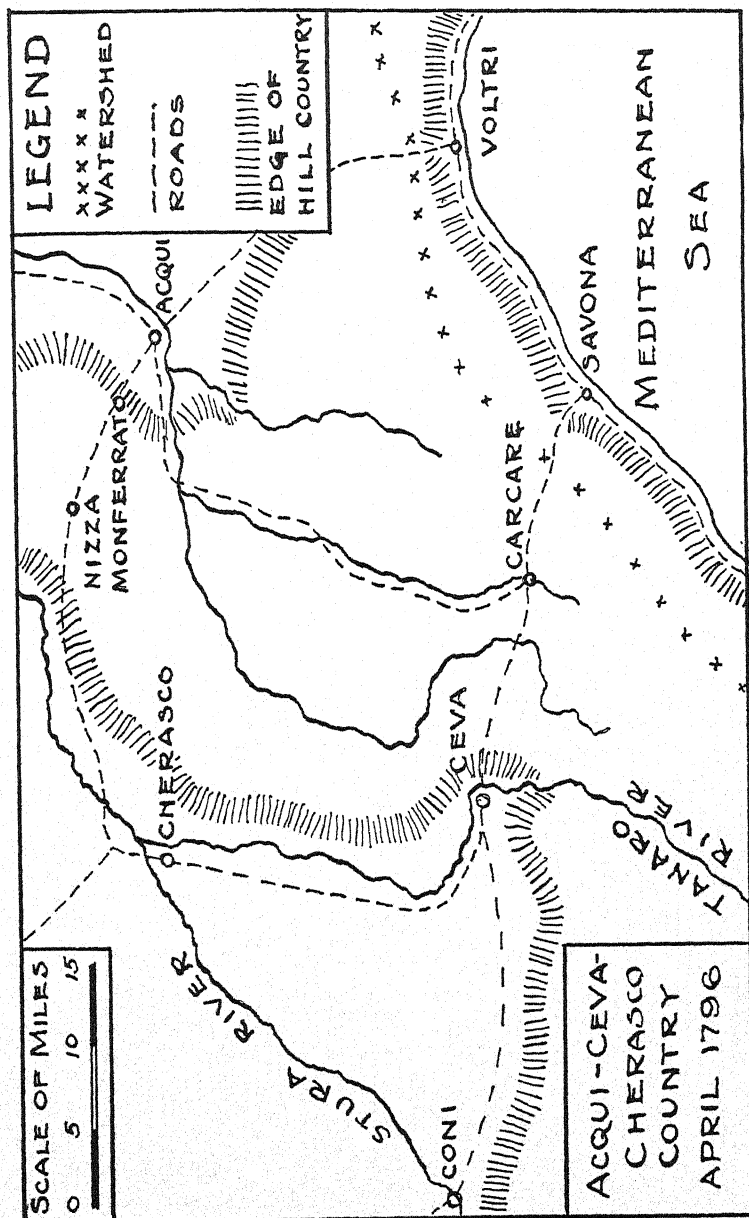
Both Austrians and Piedmontese were dispersed over wide fronts after the fashion known as the cordon system, an arrangement so universally abused by Nineteenth Century writers that it requires explanation. If its parts can reenforce each other quickly enough, a cordon is the disposition of least risk. On the defensive everything is covered, on the offensive the several units sweep the whole theatre of war. The strength or weakness of the arrangement depends entirely upon the time it takes for the different units to support one another. An enemy who concentrates against part of a cordon, but fails to crush that part before the other parts come up on his flanks and rear, is crushed in his turn.

Beaulieu, with the Eighteenth Century preoccupation about supplies, planned to attack the extreme French right at Voltri. Thus he would cut the communications of the French army with the important city of Genoa and, in his own words, would drive that army from "the only place in the Riviera where there were sufficient ovens to bake his bread." The plan seemed good, and his Piedmontese colleague wrote: "the enemy

will never dare to place himself between our two armies"—which was precisely what Bonaparte was about to do.

Notwithstanding the future Emperor's good generalship and the exaggerated praise since lavished upon it, the first two operations of the coming campaign, the attack upon the Piedmontese and the occupation of Milan, were both dominated more by politics than by strategy. In the Piedmontese case the political factor was their discouragement which today might be called defeatism. For months before the opening of the campaign Allied diplomats in Turin had repeatedly reported an influential and active party there to be seeking a pretext for abandoning the war.

In point of strategy Napoleon, who knew the whole region well, skilfully utilized a geographical accident. The best road across this part of the hills known as the Ligurian Alps ran from Savona on the Mediterranean westward and somewhat northward to Carcare near the watershed of the range, thence in the same direction to Ceva in the upper valley of the Tanaro, and thence northward to the Piedmontese capital, Turin. The neighborhood of Carcare is also the center from which radiate three other valleys, running respectively northeast, north, and northwest, forming with the Savona-Carcare-Ceva road a pattern like a semi-circular fan with Carcare at its center. The rough country and the lack of good lateral communications between the middle reaches of the various river valleys made Carcare an important center of communications. Although held only by a weak detachment, it was the point of junction between the Austrian right and the Piedmontese left. The shortest roads between Piedmontese headquarters at Ceva and Austrian headquarters at Acqui ran through it and thence in a north or northeasterly direction down the first and second of the three northerly river valleys just mentioned. Thus should Carcare be seized and held by the French they could compel the Allies to a slight but not wholly unimportant detour. It is about fifty-seven miles along the plain outside of the circumference of the fan from Acqui via Nizza Monferrato to Cherasco on the Tanaro and up the Tanaro valley from Cherasco to Ceva, while the direct communication between Ceva and Acqui via Carcare is about forty-two miles.

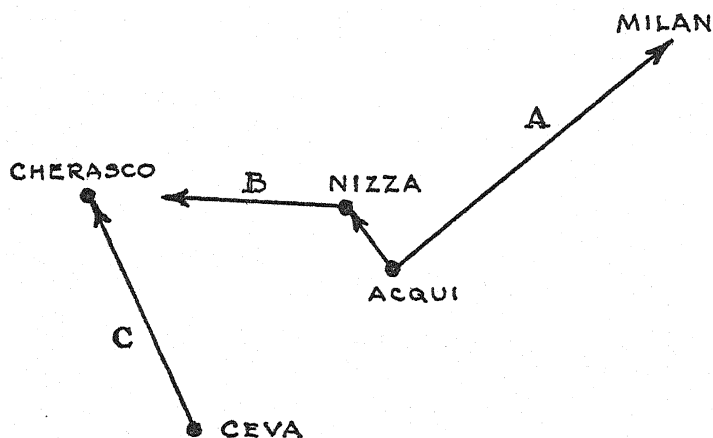


Having begun by easily taking Carcare, Bonaparte shuttled his forces rapidly to and fro about that center. Successfully calling upon the men of his mass of manoeuvre for the greatest exertion both in fast marching and in doing without sleep, he made himself far superior in numbers at each successive point which he wished to strike. In a series of partial but sharp actions he pushed back the isolated detachments of the Austrian right and the Piedmontese left. On two occasions considerable bodies of the undisciplined French opposed to the Austrians got drunk in a captured town, rioted and looted in true revolutionary style, and failed to put out proper outposts. Once this resulted in a temporary check, but the situation was quickly restored, and in less than a week from his first move the young commander, free now for several days at least from Austrian interference, stood before Ceva.

Here, in strict obedience to the unreasonable orders of the Directory, he assaulted the Piedmontese defenses and was bloodily repulsed. Next day, however, the defenders wishing to draw nearer to the Austrians, retired. Fighting delaying actions with varying success, they continued their retreat until they had established themselves in a strong position behind the river Stura with their flanks covered by the fortresses of Coni and Cherasco.

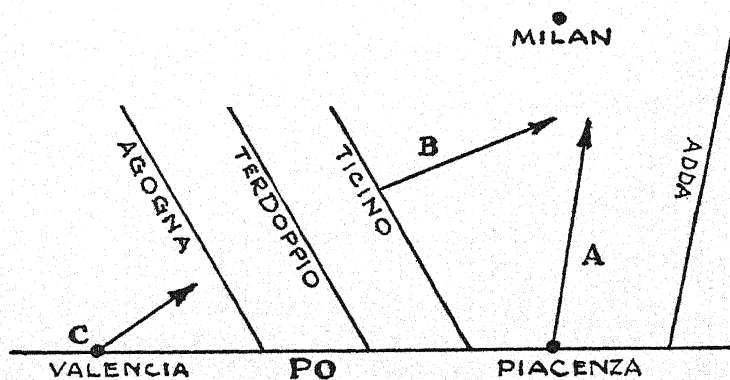
At this point the tide seemed about to turn against the young general. In itself the hostile retreat had been no more decisive than the retreat of the French from the frontier to the Marne in 1914 was to be. If the Piedmontese were tired, so were the French. If the morale of Napoleon's men was better, on the other hand they were suffering from hunger and short of ammunition. Moreover Beaulieu, his full fed troops well in hand, was coming via Nizza Monferrato to the support of his Allies. Knowing something of the situation in Turin, Bonaparte bluffed boldly, demanding an armistice with Piedmont on harsh terms. At the same time—so an English agent reported to his employers—he fully realized that if his bluff failed he must retreat to the Mediterranean if only for supplies.

In the event the peace party in Turin got the upper hand, and Piedmont surrendered—somewhat to the future Emperor's



PARTIAL SEPARATION OF AUSTRIANS AND PIEDMONTESE.

- A. DIRECTION OF AUSTRIAN RETREAT HAD THEIR SEPARATION FROM PIEDMONTESE BEEN COMPLETE.
- B. ACTUAL AUSTRIAN MOVE.
- C. PIEDMONTESE MOVE.



NAPOLÉON TAKES MILAN BY VIOLATING PARMESAN NEUTRALITY

- A. FRENCH MARCH FROM PIACENZA.
- B. AUSTRIAN COMMUNICATIONS.
- C. FRENCH LINE OF OPERATIONS FROM VALENCIA.

surprise, according to the English agent. At the moment Beaulieu was only two days march away, so that within forty eight hours the French position would have become untenable. It was April 28, and as yet the campaign was only eighteen days old.

The second operation of 1796, the French seizure of the Austrian duchy of Milan, was decided like the first more by policy than by arms. In this second case the political move was the simple one of violating the neutrality of a weak state. The Piedmontese surrender had thrown Beaulieu on the defensive. Whatever his previous numbers may have been, he now had only about twenty five thousand men; whereas the French, in spite of their lengthening communications, had been re-enforced so that they still had a field army of forty thousand. Nevertheless he might hope to hold the Milanese territory which was covered by strong obstacles, on the south the great river Po, on the west by three successive river lines, the Agogna, the Terdoppio, and the Ticino. Retreating north of the Po, breaking the bridges and burning the river boats, he prepared to resist. He respected however the neutrality of the little independent state of Parma and therefore did not burn the boats at Piacenza on the south bank of the Po. Learning of this omission, Bonaparte whose army was now rested, threw an advanced guard into Piacenza by one of his rapid marches and pushed it across the river. Outnumbered, Beaulieu in turn found himself obliged to violate a neutral state or lose his army. He retreated to the Tyrol across Venetian territory, leaving behind him a garrison in the great fortress of Mantua.

The old soldier might have argued that in so doing he was only stretching the customary right of Austria to pass troops under certain conditions across Venetia between the isolated duchy of Milan and the mass of the Hapsburg possessions. Nor can Bonaparte's action at Parma be condemned as a wholly unprecedented crime; neutral states had sometimes been violated in earlier times. Two years before, at a time when his advice was influential in the French Army of Italy, that army had made nothing of the neutrality of Genoa. Nevertheless it is significant that the young Corsican gained his

second great success by breaking an accepted rule of war which his opponent had observed.

In the opening days of June, within less than two months from the opening move on the Riviera, Italy was cleared of the Austrian field army.

Now followed a third phase of eight months in which Napoleon was strategically on the defensive. Favored by victories of the Arch-Duke Charles in Germany, the Hapsburg Emperor was able to send no less than three successive armies to relieve Mantua and drive the French back. All were heavily defeated.

By contrast with the first two phases which had owed so much to politics, this third phase was one of pure strategy. Instead of partial engagements between advance guards and rear guards or at most between detachments, the young commander now fought victorious battles, Castiglione, Arcole and Rivoli. In each case the general formula was the same. In emerging from the Alps the Austrians were confined to a few long and narrow defiles. To use only one of these at a time would have been to creep along in a single interminable column. Consequently they invariably divided their forces. Bonaparte, able to manoeuvre freely in the plain and among the foothills, was thus given a series of opportunities for utilizing that mobility which Guibert had taught, which the unencumbered revolutionary armies had occasionally practiced, and of which he himself and his command were now masters.

Meanwhile he forced large indemnities from the rich and unwarlike Italian states, making the war not only self-supporting but also a source of revenue to the needy French government. On the other hand he began to be anxious about his communications, for the abject submission of the Italian governments to him destroyed their prestige in the eyes of their subjects and thus threatened to throw the peninsula into anarchy in which he and his little army might be engulfed. From long habit, most of the Italian peoples remained politically passive, but two active minorities began to form. A democratic and pro-French faction wished to overthrow the discredited old regime and social order, while a militantly conservative and reactionary party, furious at the greed of the

French, threatened a general revolt. A French General from the Rhine Armies, later one of Napoleon's trusted subordinates, visited the Army of Italy about this time and records some details of the Corsican's wholesale grafting. Sometimes he liberally shared his plunder with his personal staff. At least one of his chief Lieutenants, Augereau, was not far behind. Of him the same witness records how "In a town of Romagna he entered a pawn-shop, filled his pockets with gold and jewels, and posted a sentry over the place—whom he calmly had shot because the man took something!"

For the moment Italian dissatisfaction resulted only in isolated insurrections which Napoleon and his troops fiercely put down, but both for him and the Directory the danger was great. He was operating far from his base among a numerous population which might turn against him. The Directory, conscious of their weakness, needed two contradictory things: glory to reestablish their credit at home, and peace which they could have only by coming to terms with Austria.

At last, in the late winter and early spring of 1797, after long discussion as to whether or not it would be safer to set up some sort of revolutionary government in north Italy and whether or not to conciliate the Emperor or to advance further against him, the Directors decided. In the political sphere they directed Bonaparte to set up in north-central Italy a democratic republic on the French model, while making the laws and naming the important magistrates himself! At the same time, taking advantage of the momentary weakness of Austria through her heavy losses in her disastrous attempts to relieve Mantua, he was to advance across the Tyrolese Alps toward Vienna in concert with the French armies already in Germany in order to dictate peace to the Emperor.

Putting aside the extreme improbability of being able to "dictate" any durable peace to a powerful enemy whom one does not mean to destroy, the move invited disaster. At such distances from Paris and from each other, the movements of the different French armies could not be effectively combined. That of Italy, with smouldering insurrections menacing its already long communications, would be still more dangerously isolated by such a bound forward.

Napoleon himself seems to have been in part responsible for the decision to make so hazardous a stroke. If so his confidence was short-lived. He had now been reenforced to eighty thousand men, of whom he left half behind to cover his communications through Italy. With the other half he advanced, the Austrians retreating before him to collect reenforcements, and he himself without news of the French armies on the Rhine. Opinion in Vienna became alarmed, but he in turn became increasingly anxious. He was short of supplies, with his army thinly extended over a wide front, and behind him Italy might at any moment burst into flames.

On April 18 therefore, just over a year from his first stroke at Beaulieu and the Piedmontese, for the first time he disobeyed his government by signing Preliminaries of Peace most favorable to Austria. After so many French victories the Austrian Emperor indeed abandoned two valuable possessions, Belgium and Milan, but on the other hand both of these territories were detached from the main body of the Hapsburg states, and this main body was now to be extended by receiving the enormously rich city of Venice together with most of the Venetian possessions on the mainland—one of the most splendid prizes in Europe. The arrangement was subsequently ratified by the Directory which, owing such prestige as it had to its young commander's Italian victories, could not disown him even had its own need for peace been less. Propaganda at home was made to call the dubious deal a triumph.

Thenceforward France was to achieve no true peace until after Waterloo. Whether or not the new and the old regime might have confronted each other tranquilly across the Rhine and the North Sea, the establishment of a satellite state in northern Italy was to mean endless conflict. The existence of that satellite was to encourage the French to further advances, while the weakness of their creation was to condemn them continually to support it. The abandonment of the idea of natural frontiers removed still further the chance of reconciliation between France and the other powers—if indeed that chance still existed. Nor can the cynicism of the Venetian bargain be left out of account. An era can digest a certain number of shameful and wicked acts, but if that number be exceeded

then confidence is destroyed so that no pledge or treaty means anything. Without confidence, as our own time has discovered, suspicion and strife are infinite. The nemesis of the inseparable trio, Revolutionary democracy, popular passions, and the mass army was as relentlessly logical as a proved proposition in mathematics.

However shameful the Austrian share in the Venetian steal, at least the Hapsburg dynasty was a traditional thing, recognized as legitimate by the enormous majority of its subjects and not greatly hated by the Venetian aristocracy whose rule it now supplanted. The Revolutionary French Republic enjoyed no such advantage. Consequently from the Preliminaries of April 1797, in a Europe increasingly filled with fear and therefore with hatred, the French found themselves compelled to advance further and further, seeking in vain to force an end to strife by piling violence upon violence, victory upon victory.

England was not long left alone to continue the war. Within two years of the Preliminaries of April 1797 she was joined by a second coalition of Russia, Austria, Turkey, Portugal, Naples and the Pope, banded together to resist French aggression in Italy. In September 1798 the needy and desperate Republican government had sought to regularize its compulsory military service by replacing Carnot's levy in mass by a new conscription law. Introduced by Jourdan of Wattignies, the measure made all able bodied Frenchmen liable for service from twenty to twenty five, the number actually to be called depending upon the necessities of the state. The spirit of '93 had now so changed that in its first year Jourdan's law succeeded in raising the aggregate of the French armies, now stretched out from Holland to Naples, only to a hundred and sixty thousand. With Napoleon absent in command of an Expeditionary Force in Egypt, allied armies under the energetic Russian Suvaroff swept the French almost wholly from Italy.

Returning, in November 1799 the future Emperor made himself master of the Republic with the title of First Consul. All efforts had failed to raise the numbers of the French armies

to two hundred and thirty thousand. Besides the scarcity of money, soldierly spirit was now so scarce that desertion was a plague. A draft of over ten thousand for the army of Italy arrived hardly more than three hundred strong—a loss of about ninety seven per cent. When one division lost only five per cent of its effectives on the way to its concentration point in eastern France this was considered good. Bonaparte found it expedient to break with “equality” by permitting exemption on payment of a substitute. Nevertheless his energy succeeded in raising a Reserve Army of seventy thousand for the campaign of 1800.

Again the corner was turned. The First Consul took his newly raised Army to Italy, and at Marengo defeated the Austrians now unsupported by Russia. The numbers were small, at the beginning of the action thirty or thirty five thousand Austrians opposed about twenty thousand French who were within an inch of defeat and were saved only at the last moment by the arrival of a detached division. Before the year was out, however, Moreau with his far larger force had gained a greater victory in Germany at Hohenlinden. Consequently the land powers of the coalition agreed to another nominal peace—welcome enough to France which since 1792 had lost in killed and wounded over seven hundred thousand men.

Marengo gave Napoleon still another new idea. The intervention late in the day of the detached French division had been effective out of proportion to its numbers because its men were fresh, while the Austrians and the other French divisions were tired from hours of fighting. This chance effect he might hope to reproduce by design, thrusting forward a part of his troops to fatigue the hostile body while he held out a considerable reserve to be thrown in when the enemy's exhaustion should have gone far enough.

On the continent the peace which followed the campaign of 1800 lasted four years, the longest interval of comparative repose which Revolutionary-Napoleonic France was to know. Indeed for a part of 1802 and '03 there was an uneasy peace even with England.

* * * *

The French under Napoleon used this pause to reorganize their internal affairs and to build up their military resources. In both spheres they continued and consolidated the Revolutionary program. Internally the essence of their new scheme was the equality of all citizens before the law. On the military side they maintained the conscription. The harsh law, already moderated by permitting the payment of substitutes, was further softened by a number of exemptions, but the principle of compulsion remained. Although by 1804 one out of every ten conscripts in France had temporarily bought his freedom, nevertheless the survivors of the optimistic and humanitarian democrats of the first Revolutionary days found their country permanently on a war footing with themselves and their sons still subject to call if need be. The Revolutionary machine, driven by ambition and fear, could not be stopped. Abstract "Liberty" still meant universal military servitude.

Meanwhile among the opponents of Revolutionary France the Austrians made a first attempt to copy French methods of divisional organization and of supply by "requisition"—in practice by plundering.

The interminable conflict began again in 1803 when the English declared war against the French annexation of Piedmont. In the following year Napoleon made himself hereditary Emperor without changing the military situation. While Austria and Russia made ready to join England, he prepared to invade the latter country. In 1805 upon the failure of the naval combinations of which the success would have permitted him to do so, he rushed his Grand Army of about two hundred and twenty thousand men across France and southern Germany against the Austrians. Moving his great numbers at high speed and inflicting the utmost sacrifices on his men, he surrounded an advanced Austrian army at Ulm so thoroughly that it surrendered without fighting. He next advanced to Vienna which he occupied without resistance from the inhabitants, then to Austerlitz where with about fifty five thousand men he confronted about eighty six thousand Austrians and Russians.

The great victory which followed was an intentional copy

of the late and lucky arrival of the detached division at Marengo. Entrenching his left and using it as a pivot, Napoleon gradually withdrew his right before the Allied attack, thus stretching the Allied line until its center became weak. He then pierced that center, cutting the Allied army in two. Finally a detached French Corps, intervening by design as the detached division at Marengo had intervened by happy accident, struck the Allied left and destroyed it.

The ensuing peace revolutionized Italy more completely than before and began to revolutionize Germany. In Italy Austria lost Venetia, in Germany her ancestral and faithful province of Tyrol was given to Napoleon's ally Bavaria.

In the following year, 1806, Napoleon fell upon Prussia which had remained neutral in 1805 in the hope that the combatants would so exhaust themselves as to leave her mistress of the situation. Moving his two hundred thousand men at great speed, he turned the left or eastern strategic flank of the Prussians and fell upon them at Jena. He had misjudged the hostile position, but the hard fighting of his subordinates, the effectiveness of the French skirmishers against the rigid Prussian lines, and especially the chance by which old Brunswick, the Prussian Commander-in-Chief, was severely wounded in the crisis of the action, made him victorious. The victory was followed by a pursuit so vigorous that in four weeks from the opening of the campaign virtually all Prussia had been overrun.

On the Prussian side the campaign was marked by what seem to us curious survivals from an older time. The attitude of the invaded civilians toward the war would have been astonishing even in the palmy days of the Eighteenth Century, for they befriended the French army more than their own troops. In Berlin either the democratic dream of a new world was still strong or else the inhabitants were servile. With their Major at their head they came out to greet the advancing French, while their papers praised the conquerors and abused their defeated defenders. It was a mood not destined to last.

The disastrous retreat of the Prussian regulars included scenes which were pathetic and perhaps foolish but certainly not without nobility. Such was the spirit and the iron dis-

cipline of the Eighteenth Century type of army that in spite of the sufferings of the men there was no plundering. The night after Jena certain retreating units bivouacked freezing and without fires near abundant wood piles which were not touched because they were private property. When a Prussian Prince, whose men had had neither food nor money to buy it for two days, ordered supplies to be seized in a rich village, the peasants raised an uproar; and an old Colonel indignantly objected that such robbery was unknown in the Prussian army. In contrast with the looting which has so often accompanied warfare there is something fine in such forbearance.

The peace dictated to Prussia, stripping her of half her territory and carrying forward the revolutionizing of Germany, brought France no repose. The humiliated victim had to be held down by garrisons, while the Russians remained to be dealt with.

In November 1806, the month after Jena, the class of 1807 composed of boys of nineteen who would not normally have been liable for service until the following year had to be called. According to the estimate of Taine, where the old monarchy had compelled one man to enroll in the inactive service of the militia, now in the fourteenth year of the war the Revolutionary-Napoleonic state was compelling no less than ten to serve actively in arms. In some districts the percentage was much higher. In eastern France in the region afterwards designated as the Department of the Ain, for which statistics are available, in 1789 there had been only three hundred and twenty three men actually serving, while now in 1806 there were six thousand seven hundred and sixty four. Correspondingly the number of young people from twenty to thirty years old in the Department had fallen from nearly forty thousand in 1789 to thirty four thousand. The huge military machine could not thus be speeded up without lamentable creaking. Everywhere in France, especially in the south, the officials charged with recruiting reported difficulties, evasions, even occasional armed resistance.

Notwithstanding such friction, the Grand Army was again built up to about a hundred and sixty thousand, and in February 1807 at Eylau in the snow of the East Prussian marches

Napoleon with something over ninety thousand men fought a murderous and indecisive action against a slightly smaller number of Russians. Not far from a quarter of the total numbers engaged were either killed outright or died of wounds. One French Corps, having lost forty per cent of its strength, had to be disbanded.

Such a butchery required still further compulsory recruitment. After calling the class of '07 in November '06, it was now in March '07 necessary to call the class of '08. In spite of renewed difficulties like those of the previous autumn, the Grand Army was increased to about two hundred thousand. In June at Friedland the Emperor with eighty six thousand men pinned about half that number of Russians against a river. Suddenly crushing a sector of the Russian line by means of a mass of artillery, he won the only complete success gained by the French against the Czar's troops in all these wars.

Friedland was followed by a negotiated peace with Russia, the first peace which Napoleon had not imposed as a master. Moreover, although England was once more the only active enemy, nevertheless the German theatre could not be neglected. The Grand Army must still mount guard in Prussia, where the treaty imposed by France was bitterly resented. Nor could mutilated Austria be left out of account, for that state—which, as we have seen, had already after Marengo adopted the French divisional system and method of supply by "requisition"—had after Austerlitz also adopted conscription. Fiercely though the older governments in Europe hated the democratic and egalitarian ideas underlying the French armed horde, there was nothing to prevent their increasing the numbers of their soldiers by copying that horde as a military instrument. If only their peoples were now sufficiently determined to resist French aggression, then their conscripts might fight as bravely for their legitimate sovereign as the French for their usurping government.

At this moment, 1807, Napoleon decided to revolutionize Spain. Although that country had been for twelve years the faithful ally of France, he invaded it with eighty thousand men on the pretext of a joint Franco-Spanish campaign in Portugal, dethroned its dynasty, and set up one of his brothers

as King. Whatever his calculations may have been, the move was a grave blunder. From the first it meant still another and a fiercer twisting of the screw of conscription. Having already in November '06 called the class of '07, and in March '07 the class of '08, the army for Spain had to be found by calling up the class of '09 in January '08. Moreover the new and wholly unnecessary theatre of war was to prove peculiarly difficult in itself and admirably suited to English intervention.

The coasts of the Iberian peninsula were everywhere accessible to British fleets and armies based upon those fleets. Land communication between Spain and France, restricted to a few passages near the two ends of the Pyrenees, was subject to harassing attacks from the sea. The internal communications of the peninsula were bad, and the difficult climate of its central plateau—excessively hot in summer and cold in winter—further handicapped the invaders. The Spaniards are an exceptionally dour and proud people. They are still devout, and were then fanatically devoted to their religion and its priesthood, so that they were infuriated by the French looting of religious objects. Without the support of the small but efficient British army they would doubtless have been crushed, for their own armies were almost invariably beaten, but with British aid their spirit proved impossible to break. Much of their population carried on a constant and ferocious small war, cutting up French detachments and killing and torturing their prisoners, so that the invaders were compelled to keep considerable forces in their rear areas and along their lines of communication. At the beginning of 1809, out of two hundred thousand combatant French troops in the peninsula no less than three fifths were so employed, leaving only two fifths to contend against the Allied armies. The French, having invented popular or national warfare, now for the first time found a people's war waged against them.

Also Spain was distant from Germany which was actually or potentially the main theatre of operations. To march infantry over the twelve hundred odd miles between Leipzig and Madrid took two and a half months, so that troops committed in either direction must be for a long time lost to the other.

The first French troops sent to Spain were raw, green units with few old soldiers. Widely dispersed for a supposedly peaceful occupation, they were surprised by a sudden and general Spanish insurrection, and twenty thousand of them surrendered tamely at Baylen—the first French surrender since the beginning of the great war. With French prestige thus damaged, Napoleon could see nothing for it but an intensified use of force. For the fourth time he must anticipate the conscription: in September '08 he raised another hundred and sixty thousand recruits, calling the eighteen year old boys of the class of '10 and combing out men of the previous three classes who had hitherto been exempted. To strike heavily in Spain, however, this was not enough; he must also weaken himself in Germany. He withdrew his garrisons from Prussia, whereat the Prussians—whose army he had limited to forty three thousand—quietly but obstinately began to build up their strength for revenge.

By thus limiting his freedom of action in the Germanies, the Emperor assembled in Spain a field army of a quarter of a million men, the largest yet assembled in modern times. With it he scattered the Spaniards and drove the English to their ships, but to no purpose. No sooner was his back turned than the Spaniards reformed in their less accessible provinces. The wholesale robbery inevitable when so large an invading army lives off the country made the hatred of the people permanent. Moreover the English returned.

In the next year, 1809, Austria, encouraged by the continued resistance of Spain, returned to the charge. With her new conscription her active army now numbered over three hundred thousand, while French agents in Vienna estimated that this number could be doubled by calling the reserves. Although the Austrians unwisely assigned about a third of their strength to invasions of Italy and Poland, nevertheless they put into Germany no less than three hundred thousand regulars and reservists with a hundred thousand Landwehr for second line duties. Better still the spirit of army and people was excellent.

Although even Napoleon's chief lieutenants were beginning to tire of strife, his energy and the size of his recruiting field were still enough to give him numbers. Drawing troops from

Spain, again he strengthened his Grand Army in the Germanies; early in April he thought it might exceed the hitherto unheard of figure of three hundred thousand but this calculation proved too optimistic. The actual numbers with which he took the field were under a hundred and seventy thousand.

At this point we must note that many Napoleonic soldiers were no longer French. In the earlier estimates of the forces to be raised against Austria about a third were to be "allied" troops from Poland, Holland and from the little German states, all nominally independent but really subordinate to Paris, and all subject to conscription of the French type. Nor were the remaining two thirds all really Frenchmen, for conscription was also applied in the Italian, German and Belgian territories which had been annexed to France. The feeling of nationality was in most countries weaker than it is today, the general habit of obedience to governments was strong, and the Revolutionary program as adopted by Napoleon was not wholly unattractive; consequently while the French victories continued the various non-French peoples fought well under Napoleon's standards. On the other hand they could hardly be expected to stand firm if adversity should come.

The 1809 campaign against Austria was hard fought. Pushing forward rapidly, Napoleon entered Vienna in a sullen silence very different from the cheering which had greeted the French in Berlin three years before. Near the town he was checked in a bloody two days battle at Aspern-Essling. Although his Marshals advised at least a short retreat, he stood his ground and kept his hold on the Austrian capital. A pause of some six weeks followed, with both sides reenforcing themselves by drawing in outlying detachments for a decisive action. In this the French under the urging of the Emperor were the more diligent; for the battle of Wagram they built themselves up to a strength of a hundred and eighty thousand as against a hundred and forty thousand Austrians. Another Hapsburg army of perhaps fifty thousand was near, but by a narrow margin failed to join. Even with a superiority of nine to seven the French victory was long doubtful and finally incomplete. After two days fighting, with fifty thousand casualties about equally divided between the two sides, the Austrians drew off

in good order. Moreover a bad panic in the Emperor's rear repeated the lesson of Baylen as to the inferior quality of the new French armies. Only by a piece of diplomatic trickery did Napoleon succeed in transforming the ensuing armistice into a peace which further mutilated the Hapsburg state, cutting it off from the sea, imposing a heavy indemnity, and limiting the numbers of its army to a hundred and fifty thousand.

At peace again in Central and Eastern Europe, the still invincible Corsican sent a hundred and fifty thousand men to reinforce the armies of his Marshals in Spain, hoping to end the war there. The result was failure. Through 1810 and '11 neither the insurrection nor the English army could be crushed. Indeed the latter under the able command of Wellington reacted vigorously.

Outwardly, however, the beginning of 1812 found Revolutionary-Napoleonic France at the summit of power. The French Empire extended from Rome to the Baltic and included the Eastern shores of the Adriatic. The rest of Italy, Switzerland, the smaller German states, much of Poland and the greater part of Spain, were dependent Allies. Nominally Austria, Prussia and Russia were also allied, leaving England alone of the great powers as an open enemy.

Since no French battle fleet had put to sea since 1805, except for Spain the Anglo-French war had been for seven years chiefly an economic struggle. The British had blockaded the French coasts while Napoleon had replied by prohibiting both incoming and outgoing trade with England. Many scholars of the last generation have assumed that a continuance of the conflict on these terms would have meant an English victory. More recent studies, however, and especially those of the French Admiral Castex, suggest that English sea power and banking power might have failed.

One thing was certain: for the universal French Empire or United States of Europe under French leadership to survive, time was needed. Only after long repose could custom harden the new scheme into an accepted arrangement. Meanwhile it was like soft, fresh mortar or a green sapling not yet grown

into a solid tree. Everywhere the old ruling classes were hostile, while the peoples were bitter at the excesses of the French hordes. According to Dodge, if anything an undue admirer of the Emperor, in the Imperial armies: "Plunder, arson, rape, were every-day crimes which, despite flaring Orders of the Day, went unpunished. The French soldier had come to look upon these as a right. . . ."

Both Austria and Prussia, although humiliated and diminished, were still potentially great powers, and both were only awaiting an opportunity to strike. The Austrian army, limited by treaty to a hundred and fifty thousand, had reduced only the number of its private soldiers, retaining its former number of regimental organizations each with its cadre of officers and non-coms, so that it could be quickly expanded to take the field. The Prussian army, similarly limited to forty three thousand, had gone further and was actively building up trained reserves. The officers and non-coms of the little force were instructing successive batches of recruits intensively for short terms and then sending them home to await a call to arms. Thus no more than the treaty number were in service at any one time. Such a system depended entirely on the good will of the men. With unwilling recruits it would have been worthless, but resentment at the treaty and the arrogance of the French had utterly changed the spirit of the Prussians who now came forward eagerly to be trained. The contrast between the faultless rigidity of the old regulars and the awkwardness of the new short service men provoked many jests, the latter were called *Krümpers* from the broken down horses unfit for full service which were attached to batteries of artillery to do odd jobs. Even the officers who had served in America were doubtful. The chief of these, Gneisenau, believed that ill-trained masses if regularly supplied and recruited could indeed hold out against regulars for some time but could not win in the long run. As matters stood, however, there was nothing else to be done.

The encyclopedic Spengler in his "Decline of the West" writes: the Prussian "army reforms . . . as a breakaway from the professional army system of the Eighteenth Century cabinet-wars, were a sort of 'return to nature' in the Rousseau-

Revolutionary sense." The successors of the clumsy Krümpers were to serve as models for the armies of the world.

Here we may pause to note how completely the Napoleonic formula for mass warfare, which his enemies were beginning to copy, was of Revolutionary origin, and how the central point of that formula was numbers.

The purpose of the Imperial as of the Republican campaigns was the total overthrow of the hostile state. That state had to be paralyzed, at least for the moment, as a preliminary to annexing it, or revolutionizing it, or at least grievously amputating it. In any case the new regime would rest only upon force. Now to set up a regime so insufficiently based and to maintain it, a few thousands will not suffice. You must have many tens of thousands, and even these may not in the long run be enough.

As with purpose so with technique. Without economic ruin a mass army cannot be permanently and fully mobilized. On the other hand its individuals are of no great military value, short of national exhaustion the next draft will furnish others just as good. Heavy casualties among them therefore do not matter. One may be equally indifferent to the inhabitants of the theatre of war, who cannot accomplish much against a very large army and must submit to the political arrangements afterwards imposed upon them. Accordingly one should raise the largest possible army, for although skill and rapidity may turn inferior total numbers into superior local numbers at this or that decisive point, nevertheless one runs fewer chances when possessing superior total numbers. Next, waste no time in manoeuvres intended to economize life, but hurl your mass upon the enemy at top speed, unimpeded by an organized supply system and devouring the country like locusts. Force battle as soon as you can and as often as you must, win by repeated offensives pushed home regardless of cost, and then dictate any sort of peace you like.

So simple a program makes one wonder whether Napoleon, despite his marvelous grasp of details, was not as blind as the earlier Revolutionary leaders to the large aspects of war. Apparently he shared their naïve illusion that force is all powerful in human affairs and can accomplish any desired result

merely by intensifying itself. The accumulated hatreds roused by repeated aggression and thievery he seems to have neglected or despised. Stranger still, he closed his eyes to the abyss opening before him as France exhausted herself in prolonged mass warfare. His often quoted words: "I can afford to expend thirty thousand men per month" suggests that he saw no end to France's willingness to sacrifice her sons. Either he felt himself the prisoner of the Revolutionary hurricane, unable to halt while one legitimately governed state remained independent, or else he deliberately went forward in the spirit of a drunkard who promises himself that he will take the pledge after just one more spree.

At all events, in 1812—so soon after having in 1808 found an army for an unnecessary war in Spain by anticipating the conscription for the fourth time in three years—he invaded Russia.

For this new and equally unnecessary conflict he once more raised a field army greater than any which had been seen in Europe since Attila; about half a million men, of whom hardly four out of ten, perhaps only a third, were French. To meet him the Russians could assemble less than half as many, but their average of success against the French had been greater than that of any continental power. Also they trusted in the difficulties of their immense country and in the strength of their national patriotism based upon religion. Very wisely, they did not offer battle near their frontiers but retreated. Napoleon tried to pin and envelop them but failed, balked by the difficulties of coördinating such a mass of men, by the badness of the Russian dirt roads which dissolved into mud under rain, and by the poverty of the region. Having occupied their border provinces, instead of stopping he pressed on, pushing eastward the point of a narrow triangle or spearhead of occupied territory, less than two hundred miles wide at its base and guarded at the northern and southern ends of that base—or, if you prefer, at the northern and southern barbs of the spearhead—only by the contingents of his doubtful allies, Prussia and Austria. At Moscow, which he reached after defeating but also after failing to crush the main Russian army at Borodino where the two sides together lost about

seventy thousand dead and wounded, the spearhead was more than five hundred miles long, with growing Russian forces opposite either barb. The dauntless Russians burned their own capital over his head, and late in October he began his first retreat. The pursuing armies and the cold turned retreat into disaster. Although the Emperor himself and his Marshals escaped by a sort of miracle, practically the whole army was lost.

After eighteen years of offensive campaigning, at first within their "natural frontiers," then for sixteen years outside those frontiers, the French were now to be forced to a defensive. Three years more were to bring their definite and final surrender.

As yet Napoleon realized neither the strain already inflicted upon France nor the consequent fragility of his Empire. While speeding incognito across Germany after the Russian disaster, alone except for Caulaincourt, he discussed with the latter various causes of French discontent, "... notably conscription into which the needs of continual warfare had swept all... the classes liable to service." "I agree," he said, "that conscription is a law that bears harshly upon families, on account of the frequent calls which circumstances have caused me to make; but it is national, because it allows of neither privilege nor exception. In times of peace it will even become popular, for the French love the career of arms, and as the door to promotion is open to ability and courage, an honorable career will thereby be opened to many young men. In this, as in so many things, the appreciation of principles of equality gives strength to the government and ensures success to the levies. If I granted exemption to one single conscript, if there were a single privilege granted to anyone, no matter whom, not one man would obey the order to march.

"The notions of equality that made the Revolution are today an integral part of the government's strength."

The host of deserters and military police in France might have told the great Corsican that conscription, with or without equality, was a curse. The number of "refractaires," i. e. refractory ones who refused to obey the call to conscript service, long considerable, was now so large that numbers of good

troops had to be used to operate against them. It has been estimated that as many as a hundred thousand Frenchmen were thus fighting each other in the guerilla combats of a straggling civil war in the interior of the country.

Unwisely determined to hold Germany and also to keep what he still had in Spain where the Allies now held nearly half the Peninsula, the Emperor again worked the conscription for all it was worth. The machinery of compulsion creaked and groaned more than ever. Although the French population of thirty six millions must still have included at least two and a half millions of valid men of military age, desertion and slackness cut nearly in half the numbers which each levy should have produced. As usual under strain, the moral forces of the country were weakening before the limit of physical resources had been reached. Nevertheless, combing out the older classes and calling out the entire classes of '13 and '14, in the spring of 1813 to the amazement of Europe Napoleon was able to take the field in Germany with two hundred thousand men. By summer, in spite of losses he may have had over four hundred thousand.

On the other hand 1813 saw the collapse of his political position. Successively the Prussians, the Swedes, the Austrians and the lesser German states came in against him. Before the end of the campaign the Allies had a million men in the German theatre alone.

In the beginning he won victories but could not make them decisive. He lacked cavalry, the raw boys who filled his ranks could not march like his earlier soldiers, and as in Russia his personal influence diminished with the increasing numbers he commanded. Moreover the Allied Generals had learned his game, while their troops fought with a new spirit. After repeatedly beating his lieutenants, in the autumn about three hundred thousand enemies gathered about him at Leipzig where he stood with not much over half that number. After three days fighting he was heavily defeated and retired across the Rhine. Meanwhile the last hold on Spain too had gone. Having taught the rest of Europe mass warfare, the French now found it effectively used against them.

Against the expected invasions of France from the north-

east and south, still another violent effort was made to raise men. Toward the end of 1813 and at the beginning of 1814 decree followed decree, calling up altogether and on paper no less than nine hundred thousand recruits. These figures however were mere words. To slackness and desertion there was added a shortage of clothing, equipment, and especially of arms. Consequently only about a quarter of the nine hundred thousand were organized and only an eighth took the field. At the end of '13 hardly a hundred thousand, perhaps only ninety thousand French could be assembled for the critical north-eastern theatre. The machinery of compulsion was running down. Meanwhile the Allies already had three hundred and fifty thousand on the Rhine, with many more coming on.

The campaign of 1814 lasted only three months. Scorning the old, leisurely habit of going into winter quarters, the Allies invaded France about the new year. The French troops, now almost all young boys, bravely endured the miseries of a winter campaign. Moreover Napoleon's personal, centralized method of command was more effective with smaller numbers than it had been with the great masses of the previous years. In a series of moves which have remained a model for strategy he won several partial victories. With daring "economies of force" he sought to delay and "contain" the various Allied bodies by detachments much smaller than each of those bodies, while with his mass of manoeuvre he would fall first upon one then upon another. The odds, however, were too great. His blows were like those of a tiring boxer who can no longer shake his opponent. The energy of the Czar and of the Prussian commander old Blucher urged the Allies forward. When at the end of March they took Paris, his own Marshals, long since tired of war, compelled the Great Captain to abdicate.

As he crossed southern France on his way into exile mobs threatened him, shouting "Monster! give us back our children."

After having been thus ushered out of his adopted country in April 1814, Napoleon none the less boldly returned in March 1815. Dispossessing the restored Bourbon dynasty without a shot fired, within three weeks he was again master of France. Although one might long debate both the causes and the sig-

nificance of such a welcome to such a man, no one can deny its irony.

The exhausted country, having welcomed its Soldier, must consequently prepare for a renewal of the war with all Europe. The army which had played the chief part in his return was enthusiastic but felt its power too much to refrain from disorder and indiscipline. In one respect its military quality was improved, for a number of veterans who had been in garrison in the German fortresses and had been captured there had now been released. Nevertheless numbers were fatally lacking, and the Imperial government no longer dared openly to conscript new levies. As we shall see at more length in the next chapter, the Bourbons had pleased the country by abolishing conscription, so that it seemed politically unwise to return to it. Accordingly every other resource was first tried. Men were swept together from all available sources: the retired list, the navy, the police, the customs guards, even from the long inactive home defense militia called the National Guard. These expedients, however, failed to raise the numbers of the active army to three hundred thousand. Too late, a partial and thinly disguised conscription was decided. At the end of May the class of 1815, which had been called in the previous year but had for the most part never served and had in any event been allowed to go home, was "recalled" into service as if its members were already on the active list but absent on leave. The long delayed move came to nothing, in the event all was to be decided by June 18, so that few if any of the conscripts of that year smelled powder. For the campaign of 1815 the French field army numbered less than a hundred and twenty five thousand.

The nearest Allied troops—nearly a hundred and twenty thousand Prussians under Blucher, over ninety thousand English and Dutch under Wellington—stood in Belgium. Although these alone outnumbered the French field army, they were only an advance guard. The Russians, the Austrians and a mass of smaller contingents were moving.

In this desperate situation Carnot, whom the emergency of the previous year had brought out of retirement, advised a defensive with the field army manoeuvring in and out among

the fortresses, upon which considerable work had by this time been done. Napoleon judged differently. The French, he knew, were profoundly divided; to steady them he needed a prompt victory. Such a victory was also his one chance of impressing the Allies and perhaps persuading them to peace. Accordingly he refused Carnot's advice, saying to the latter with a touch of mock modesty which doubtless reflects his need to conciliate supporters: "You know better than I how to plan a campaign, but I know better now to deliver battle." He would attack Blucher and Wellington, and perhaps by superior speed he might as in his earliest campaigns defeat superior numbers opposed to him.

The active work of the campaign from the French crossing of the Belgian border to the final decision required only four days, June 15 to 18. Moving rapidly and achieving a considerable measure of surprise, the Emperor fell first upon the Prussians. They reacted promptly and vigorously. Although beaten at Ligny they retained their cohesion and retreated not eastward toward their own bases, as Napoleon believed they had done, but northward so that they might not lose touch with Wellington. On June 18 the latter offered battle near Waterloo, holding out all day against the French attacks until the arrival of the Prussians who rolled up the French right and destroyed the last Revolutionary-Napoleonic army.

Chapter IV

Mass Warfare Continues

1815-1866.

"Conscription is hereby abolished in France."

—LOUIS XVIII'S CHARTER, 1814.

"Henceforward the Prussian army will be the Prussian nation in arms."—KING WILLIAM I OF PRUSSIA, 1860.
(Afterwards Emperor of Germany.)

MASS WARFARE SURVIVED Napoleon's fall. At first there was a lull; for more than a generation wars remained small, but universal service, which made the armed horde possible, was continued in Prussia where the horde was systematized by universal training, and everywhere huge armies still dominated military thought. Presently a new series of great wars began in America and in Europe, culminating in Prussian triumphs which dazzled the world.

* * * *

With Napoleon gone there fell a great silence. After the earth-shaking Revolutionary-Napoleonic campaigns, students of war, looking at Western Civilization after 1815, are like the audience during the rehearsal of a play when the chief actors have walked off the stage, leaving behind only scene shifters and a prompter with his book. Nevertheless acute observers, noting the actions of these lesser figures, might well have judged that the pause would not be long.

Had we not seen the impotence of our time to establish a genuine peace, we might wonder at the shortness of the pause after Waterloo. As it is, we do well to note that there was any pause at all. Mere revulsion against the horrors of war will not explain even so small a success: the Europe of 1918 was as sick of blood as that of 1815 yet we know all too well the continuous alarms and excursions which followed the Armistice with Germany. By themselves fear and disgust are not constructive. They may clear the ground so that wise statesmen may build, but of themselves they can do no more.

In 1815—unlike 1919—wisdom was vouchsafed. The kindly ghost of the Eighteenth Century rose from its grave, speaking of moderation and decorum. For the moment the peoples had had enough of megalomania and of utopias paved with corpses, so that they were willing to listen. The restored Kings and aristocracies imposed upon defeated France a peace not of vindictiveness but of reconciliation. After Napoleon's first abdication in 1814 the victorious Allies actually restored her pre-revolutionary frontier, and even after Waterloo that frontier was only very slightly changed to her disadvantage. Within France the "Charte," i. e. the Charter granted by Louis XVIII to the subjects restored to him by the Allied armies, expressly promised to abolish conscription. In American political phrasing one might call this promise the most popular plank in the platform on which the Bourbons returned to power. With legitimacy, prescriptive right, and moderation—especially moderation—once more the order of the day, all promised well.

Why then was the interval between great wars so short? For answer we must go first to the ideas of the time, then to the working out of those ideas in military institutions. In a word, democratic ideas survived because men's imaginations had been captured by the romantic movement of which democracy was the chief political symptom. Romanticism can hardly be understood except as the first stage of a movement of thought which has since turned a somersault, and now calls itself realism or naturalism. As we saw in the opening paragraphs of the last chapter, the leading idea of both romantics and "realists" is to emphasize and praise the instinctive and

emotional side of man at the expense of his intellect and power of self-restraint.

Had the Bourbons been restored by arms in 1793 instead of 1815, then the democratic ideas would not have had time to take root. Without romanticism, after 1815 the democratic doctrines might have disappeared under a rational disgust at the Revolutionary-Napoleonic butcheries. In the event the French victories had lasted long enough for the new ideas to take root. Notwithstanding Napoleon's efforts to fit the new France into the old European regime, his making himself an hereditary sovereign and his marriage to an Austrian Arch-Duchess, the French armies had carried the new creed of equality everywhere. Liberty and fraternity, although battered about, had also been dragged along. No matter how savagely denied in fact, they had at least become popular as formulae.

Except for occasional city riots, all the tall talk had not yet stirred the masses. In general the new artillery of thought had fallen into the hands of the middle class and was used by them against the nobles. Equality meant chiefly that the middle class man thought himself equal to his betters. Moreover since the middle classes were largely commercial, to them the essence of liberty was freedom from the surviving medieval restrictions which had limited the opportunity of traders to make money. That the removal of such restrictions meant proletarianism few guessed; the beginnings of that horrible cancer were hardly noticed. For the moment the pursuit of wealth had its romance. The "Napoleons of business" had at least one thing in common with the great Emperor whom they parodied;—the typically romantic disease of an unlimited imagination. Also the commercial middle class found allies among liberal aristocrats like Lafayette and non-commercial middle class men like Victor Hugo. But for the most part the leading spirits of the years between Waterloo and Sedan were the business men, anxious for peace, order and security in which to make money, but hoping to obtain these good things in a society increasingly dominated by themselves at the expense of the dynasties and aristocracies whom they envied.

At the same time the post-Napoleonic world and especially the middle class was moved by another sort of romantic emo-

tion, that is nationalism. The beginnings of nationalism were very old. Here and there throughout Christendom traces of it can be found even in the Middle Ages. Notwithstanding the cosmopolitanism of the Eighteenth Century aristocracies, the decay of universal religion following the Protestant revolt and the indecisive ending of the Religious Wars had strengthened these local attachments still further. Now with romanticism and democracy, nationalism flourished. The idea of liberty, having begun as a class feeling, could be pressed into the service of national feeling. Freedom might mean individual and class freedom from feudal restrictions, but it might also mean national freedom from alien rule. Thus, instead of the world being divided between sovereigns each ruling over his various peoples, it came to be divided between nations each hotly conscious of unity. It also followed from the democratic drift of ideas that governments when chosen by or at least supported by their people were considered completely sovereign. Who could come between a people and its God—if it had any? Romantic nationalism, with Byron in Greece, became the rage. Nor has nation-worship yet perished.

It remained to be seen whether any stable internal order could be based upon money-making plus fine phrases, or any stable international order upon the unlimited sovereignty of self-worshipping nations.

Loose gunpowder when lit merely sputters. Only when it is confined, or as it were canalized in a gun barrel, does it explode. Had military institutions taken a different form, the explosive Nineteenth Century ideas might have sputtered in mere popular tumults like those which began the French Revolution. Thanks to Prussia, army organization so canalized popular passions that—at long last—they developed their full destructive force.

Although both Austria and France kept the principle of universal service, neither maintained it in practice. Both called only a small part of the annual contingent and permitted drafted men who could afford it to purchase substitutes. The spirit of both armies remained that of a professional force.

Indeed Austria, with the largest and probably the best army

of the generation after Waterloo, seems to have influenced military policy but little.

France, yesterday a match for all Europe in arms, began the period, as we have seen, by renouncing conscription altogether. Humorously enough, within three years this great military power was compelled to return to a slight measure of compulsion because from a nation of thirty-six million enough volunteers would not come forward to keep up a modest force with a peace strength of only a hundred and fifty thousand. Even at war strength the restored Bourbons expected to muster less than a quarter of a million, so light was the military burden that these mild and fatherly sovereigns laid upon their country. This little army was recruited by calling up a mere forty thousand out of an annual class of about three hundred thousand, out of which forty thousand of those actually called upon to serve were supposed to remain with the colors for six years. In 1824 these numbers were somewhat raised, and in 1832 the war strength became half a million, the peace strength just under a third of a million, and the term of service seven years. Effectives were increasing in accordance with the democratic law of numbers, while the revolution of 1830 showed that democratic ideas were not dead but sleeping. Still the conscription remained very gentle, in 1832 the Minister of War estimated that half of a soldier's seven years of nominal service would be spent peaceably at home. Consequently, said the Minister—no less a man than Soult who had been among the ablest of Napoleon's Marshals—a strong argument for reducing the nominal term from eight to seven years was that then two uniform coats would last a soldier until discharged, while the extra year would necessitate another suit for about every other man. From the crazy finance of contemporary governments we turn with envy to a time when statesmen condescended to such economies.

The obvious weak point of the French army of the Restoration was the absence of trained reserves. Behind the Regulars there was only a National Guard of middle class citizens which could make itself a nuisance to royal governments or repress proletarian disorder but had no real training for war and would have been useless if called out against a foreign enemy. In

the event, however, no reserves were needed, the wars of the restored kings were small affairs and in peace there was no armed strain.

For the French the halcyon days of old were come again.

Prussia too was at peace, but how different a peace! Whereas the Revolutionary-Napoleonic French conscription laws had merely sought to find recruits for existing armies, Berlin now sought to train her entire manhood for war. By a strange paradox, although the armed horde reinvented by Revolutionary France was so perfectly adapted to the principles of democracy as preached by its prophet Rousseau, the most anti-democratic power in Europe now systematized it.

So complete an appearance of contradiction is in part explained by the historical origins in which Prussia differed profoundly from every other European State. In the later Middle Ages she had been founded by an order of military monks, the Teutonic Knights, who with the aid of Crusaders from the older Christian States to the south and west had conquered the uncivilized but brave heathen Prussians, exterminating the pagan aristocracy with a thoroughness and ferocity unequalled elsewhere among Christian men, and in practice enslaving the pagan common people. At the Reformation the last Grandmaster of the order turned Lutheran, married and made himself hereditary lay Duke of what is now East Prussia, making hereditary barons of the Knights of his province who backed him. The valiant clods of serfs, so recently and savagely made Catholic Christians, were automatically made Protestants. The Hohenzollern dynasty produced a considerable proportion of able Princes, especially talented as administrators and organizers of armies, culminating in the towering genius of the perverted Frederic the Great. Both in peace and war the chief support of the Prussian State was the patriotic devotion of the Junkers, the country squires who made possible the high Prussian technique of government and soldiery. Unfortunately for the world, however, the intense Prussian patriotism was of a narrow, tribal sort contemptuous of general ideas and of Christendom, relying for expansion not upon persuasion but upon force alone. Prussia was a rapacious State whose great Frederic had been noted for the cynicism with which he would

break his word. He had also set a new and evil precedent: that mere conquest without hereditary right could transfer Christian territory from one sovereign to another. Nor had his country been conspicuous either for keeping the laws of war or for moderation in victory. Had she had her way, France after Waterloo would have been dismembered.

Significantly, the pre-Revolutionary Prussian army—insofar as its recruitment had been national, for in the great days of Frederic his enlisted men had been in great part a cosmopolitan rabble unified only by the iron rigidity of Prussian discipline—had included a higher proportion of drafted men legally compelled to serve than anywhere else in Europe.

Such was the State which not only continued the French revolutionary horde-army into the peace of 1815 but amplified that democratic device by peace-time training of every able-bodied citizen in arms.

Prussian motives for not only perpetuating but systematizing such an appalling monster as the armed horde were mixed. First, universal compulsion is the cheapest way to get a large army. Compared to the other great powers of 1815 Prussia was poor; much of her soil was barren, her industrial development had hardly begun, nor had she much accumulated capital. Besides being poor she was both ambitious and afraid. Ambition had been her reason for being; she had grown great by successful conquests. At the same time she knew herself to be disliked, and in the West she had a difficult strategic situation. The 1815 settlement had given her a wealthy province on the Rhine, bordering upon France and upon French-speaking districts which are to-day part of Belgium and might sympathize with France in war, and isolated from the center of Prussian power by German states still independent. Further, her Rhenish province was Catholic in culture whereas her own tradition was Protestant. Again, in an age when legitimacy still counted, the Prussian Crown had no traditional right whatsoever over most of her new Rhenish territories. Finally, the memory of the recent past made her exaggerate the chances of an attempted French reconquest of the Rhineland, much as French statesmen for a decade after the Armistice of 1918 exaggerated the chances of an immediate German westward

march. How far she was merely ambitious and how far honestly afraid need not here be argued. Suffice it that she desired the greatest armed strength her comparative poverty could command.

Now in 1815 armed strength was thought of chiefly in terms of numbers. Since the beginning of the Revolutionary-Napoleonic struggles, victory had been with the big battalions. The First French Republic had saved itself and begun to advance by superior numbers. The young Napoleon, inferior in total numbers to his opponents, had won by concentrating more men than those opponents at points which he knew how to make decisive. Almost all the victories of his middle period had been won with superior total numbers, and in the end before superior numbers he had at last gone down. This had not been lost upon commentators; we shall see in a moment how, even without Prussia's action, military theory alone might have brought back the hordes. In war as in other fields of thought, men had begun to think in terms not of quality but of quantity. That is they had begun to think democratically. Whether the results have been happy the reader may judge.

The post-Napoleonic Prussians were not blind to the implications of what they were doing. They well knew that they were imitating men whose principles they hated and despised, but they hoped to separate nationalism from democracy, using their mass army to support the former without yielding to the latter. Moreover they had a grudging admiration for the French Revolutionaries. Thus the great soldier Gneisenau who had said after Jena "permanent armies...have killed national spirit and military spirit," had praised the French Revolution for having "...put to work the whole national force of the French people." Stein the statesman and inveterate enemy of Napoleon, had written that the French Revolutionary Committee Of Public Safety, although worthy of hatred and contempt, was nevertheless a great example "...because of the energy with which it had organized and developed the forces of the French nation." Moreover universal service might be used in another fashion often connected with democracy, that is for universal education. General Von Boyen, the chief author of the Prussian universal service law of 1814, had been

deeply interested in the educational value of the army. According to him "...the spirit of a people must be awakened and nurtured by the government," the army must be more than a military instrument. It should be closely identified with the people, since the life of the individual belongs to the State and every inhabitant has the duty of sharing in the work of defense.

What the Prussians did not see was that the mass army was essentially the barbaric horde. Rousseau the apostle of modern democracy who constantly praised barbarism at the expense of civilization, would have applauded their action.

Having decided upon universal training, the Prussians had now to organize it. No statesman, however insistent upon military quantity, can altogether neglect quality. The first mass armies had been thrown together in desperate haste under the lash of necessity. Now that time no longer pressed, the new hordes must in some way be systematized.

A state which seeks numbers via universal training and service can organize in one of three ways. Prussia might have made her whole army into a sort of militia as the Swiss have done, calling everyone up from time to time for training or to meet emergencies, and retaining constantly with the colors only the smallest number of professional officers and non-coms necessary for regular administration and coherent Higher Command. American readers may remember the halleluiahs of 1916 in praise of the democracy of the Swiss system. An able book, "Statesmanship Or War," by General John McAuley Palmer, defending that system was published as late as 1927. On the other hand a government with only militia at its command is at the mercy of public opinion. In other words officers commanding militiamen have little hold on their men who will fight only for some governmental purpose with which they enthusiastically agree. For the sake of internal order alone this was the last thing the Prussian government desired. Nor is there a single instance of modern militias creditably meeting a real military test. Whatever else the Prussian officer may be, he is a good soldier and no fool. Consequently Prussia's choice was between a dual army of regular and militia units, or a single organization in which the reservists when called to service are considered chiefly as reinforcements to be incorporated

into existing regular units, only secondarily forming units of their own. After Napoleon's fall Prussia chose the dual system of separate regular army and of militia units known as "landwehr."

As to which branch of the dual army should predominate, there was much discussion. The parties of the left having failed to abolish the regulars and set up a wholly militia system, favored the landwehr as more "popular" and "national" than the regulars. Aristocrats and soldiers prized the regulars for their firmer discipline, their consequent obedience to government, and their greater efficiency. Both branches of the service were strongholds of caste, until 1918 no one could be a Prussian officer or reserve officer who had been or whose father had been either an enlisted man, a workman, or a retail tradesman, but in the landwehr the officers had little hold on the men. However the post-Napoleonic Prussian system suffered no serious shock until 1848.

Notwithstanding the cheapness of conscripts as compared with volunteers to whom a government must pay wages comparable to those earned in civilian work, in 1817 Prussian army expenditure was twenty-six million thalers out of a total annual revenue of only forty-five million. Therefore although the regulars with the colors numbered only a hundred and twenty five thousand—hardly more than one percent of the Prussian population of 1819—money was lacking for an adequate training of the landwehr. Less than two thirds of the annual "classes" of over sixty thousand served from their twentieth to their twenty third year as active regulars, then two years more as regular army reservists. Worse still, there was an even greater want of training for the temporary officers who were to serve as landwehr company commanders and lieutenants.

Meanwhile in France as in Prussia both the political and the military implications of the existing types of army were actively discussed. From time to time French soldiers, General Foy, Colonel Paixhans, Marshal Soult himself, urging the need for numbers in any serious war, advocated a large trained reserve. Also, in the words of Monteilhet: "In vain from 1815 to 1866 a minority of liberals and republicans pointed out the happy

and efficient development of our own (i. e. French democratic) principles beyond the Rhine." Godefroy Cavaignac in his "Histoire de la formation de la Prusse contemporaine" summed up matters thus: "When the crisis which had shaken all Europe was over, . . . old monarchial Prussia, with its feudal land-owners and its social hierarchy came out with a method of recruitment more congruous in principle with the spirit of the new century than that of Revolutionary France. This fact decided the history of the Nineteenth Century. . . . Prussia remained faithful, at least in this point, to the leading ideas which had given her resurrection. Hence she succeeded . . . in laying a firm foundation for her future power."

* * * *

To the example of Prussia in retaining the mass army there was added the force of military theory, always most powerful during a long peace. War differs from most human activities in that it is intermittent. In peace armies cannot be fully exercised; they must be content with sham battles in which there are no bullets in the guns. Invariably, as living memories of the last war fade with time, soldiers must guide themselves more and more by the written records of former campaigns, especially by the essence of those records as distilled into theory. The word has become unfashionable; "theoretical" is too often used as a term of abuse as opposed to fact. Nevertheless both the word and the thing are inevitable; a theory is merely a law or general principle which sums up the particular facts in a given case. Were it perfect it would explain and connect all the facts: if it fail to cover the greater part of them then it cannot justly be called a theory but becomes a mere hypothesis or unverified piece of guess-work. Not only now but as we approach 1914 we shall note its enormous influence.

In the present case the two chief theorists who during the long peace analyzed and explained the colossal Revolutionary-Napoleonic events were Jomini and Clausewitz.

Baron-General Antoine Jomini was a French-speaking Swiss who began as a bank clerk but spent the greater part of his long life—born in 1779 he lived to be ninety—as a Staff Officer,

first in the French service where he shared in many campaigns, then in the Russian. Of his books the best known is his "Summary Of The Art Of War" ("Precis de l'art de la guerre") treating chiefly of military policy and strategy. He begins, rightly enough, with the relation between war and policy, although his analysis of that relation is philosophically imperfect, dividing wars into nine different categories:

- I—"Offensive Wars To Recover Rights.
- II—Wars Which Are Politically Defensive And Militarily Offensive.
- III—Wars Of Expediency.
- IV—Wars With Or Without Allies.
- V—Wars Of Intervention.
- VI—Wars Of Invasion, Through Desire For Conquest Or Other Causes.
- VII—Wars Of Opinion.
- VIII—National Wars.
- IX—Civil And Religious Wars."

This is interesting and significant but somewhat confused. What, for instance, is the real difference—if any—between a "War Of Opinion" and a "Religious War"? The whole list gives no clear principle by which we may classify wars.

As to the form which operations should take, Jomini's thought shows traces of Eighteenth Century conceptions. He has been blamed for teaching strategy in too geometrical a fashion, too much in diagrams of the sort which that Century loved. Further, in a sensible, unromantic fashion perhaps not unrelated to his banking experience, he insists that the means must always be subordinated to the end; "offensive operations should be proportioned to the end in mind." Thus he saw clearly the lack of proportion and moderation which had cost Napoleon so dear in Spain and in Russia. Of the great Corsican's later years he said: "One might say that he was sent into the world to teach generals and statesmen what to avoid."

On the other hand the long lived Swiss appreciated the strong points of the Revolutionary-Napoleonic method. The lightning marches leading up to the great French victories which had again and again swept the board, knocking the chess-

men pell mell into the astonished opponent's lap, were by no means lost upon him. To him "war, far from being an exact science, is a terrible and impassioned drama." Crushing victory in a general action could indeed be made to pay dividends. "The excessive abuse which this system suffered at the hands of Napoleon does not exclude the real advantage it offers, so long as one knows how to limit one's own successes and to keep one's enterprises in right relation to the respective condition of the neighboring armies and nations." And again: "If the art of war is enlarged by the adoption of the system of marches, humanity on the contrary, loses by it; for these rapid incursions of considerable masses, feeding on the regions they overrun, do not materially differ from the devastation of the barbarian hordes between the Fourth and Thirteenth Centuries. . . . Still it is not likely that this system will be speedily renounced. . . . If, in time, social order assumes a calmer state, —if nations, instead of fighting for their existence, fight only for their interests, to acquire a natural frontier or to maintain a political equilibrium,—then a new law of nations may be agreed upon, and perhaps it will be possible to have armies on a less extensive scale. Then also we may see armies of from eighty thousand to one hundred thousand men return to a mixed system of war,—a mean between the rapid incursions of Napoleon and the slow system of positions of the last Century. Until then we must expect to retain this system of marches which has produced so great results; for the first to renounce it in the presence of an active and capable enemy would probably be a victim to his indiscretion."

At this point the reader will note Jomini's seeming blindness to the strength of the prepared defensive sheltered behind permanent or temporary fortifications. To this strength as well as to Eighteenth Century political conditions the slowness of that Century's wars had been due. But like practically all soldiers for a Century after Waterloo Jomini seems to have thought operations must become more rapid.

On the capital point of numbers Jomini was again somewhat balanced. In the passage just cited the reader will have noted his appreciation of the connection between numbers and the political object of a war: a nation fighting for its political life

cannot be content with an army of moderate size. Moreover he says: "...to be secure a state must have ... a good system of government. Then the people everywhere may be organized as militia, and may serve as reserves with the regular armies, which will make these more formidable..." He approves Napoleon's constant desire for military destruction of the main hostile army—an objective usually implying heavy losses and therefore numerous replacements. Moreover his emphasis upon concentration also implies superior total numbers, for an enemy of approximately equal force—if undistracted by diversions which he deprecates although they had been essential to Napoleon's earlier successes—may simply concentrate in his turn. On the other hand, for him the chief instrument of war is not the nation in arms but a regular army supported by reserves of secondary importance. His prescription for a "... permanent army ... always ... respectable in numbers and capable of being doubled by previously trained reserves" does not wholly differ from Eighteenth Century French practice.

Interestingly enough, Jomini grasped not only the relation between numbers and the political object of wars but also the effect of numbers on the necessity for a quick decision. He wrote: "...the greater the strength of the armies the more necessary is the system of rapid operations and prompt results" a fundamental point insufficiently understood even today.

From Waterloo to Sedan no military writer's influence equalled Jomini's. Outside of the Prussian service, officers, if they attempted higher military studies at all, put him first among theorists. In Prussia, however, studious soldiers presently began to prefer the books of another philosopher of war whose fame, at long last, was to overshadow Jomini's and dominate military thought. This was Clausewitz.

General Karl Von Clausewitz, whose work remains the foundation and starting point for all profound analysis of war, like Nietzsche and certain other eminent Prussians, came of a family originally Slavic. Having first seen active service as a thirteen year old cadet in 1793, he was constantly in the field as a Prussian officer until after Waterloo, with an important interlude as a volunteer in the Russian army throughout the campaigns of 1812, '13, and '14. Before his early death in

1831 he did not finish his great work "On War" ("Vom Kriege"), but in it he achieved an apparently permanent basis for the philosophy of armed conflict, and developed that philosophy after a fashion peculiarly congruous with the thought of his time.

The permanent value of Clausewitz' work in his analysis of war as a political act, the application of organized force to make good some point of policy. For him war is a continuation of state policy by other means. The definition might perhaps be broadened by substituting the word "group" instead of state in order to include civil wars, otherwise it is hard to see how it could be bettered.

From this Clausewitz went on to classify wars as "limited" and "unlimited": "The two kinds of wars are, first, those in which the object is the overthrow"—by which he means the total defeat—"of the enemy, whether it be that we aim at his political destruction, or merely at disarming him and forcing him to conclude peace on our terms. Secondly, those in which our object is merely to make some conquests on the frontiers of his country. Transitions from one kind to the other must certainly continue; yet the divergent natures of the two are apparent." The second sort may be called wars of limited political objective; that is wars of which the object may be achieved merely by convincing an enemy not yet crushed that it is not worth while going on. Thus Spain surrendered Cuba in 1898 and Russia Manchuria in 1905 although both the Spanish and the Russian governments might have fought further.

As we saw in Chapter I, the transitions between "limited" and "unlimited" war are almost infinite; from the war of extermination to mere demonstrations on a hostile frontier there are as many possible shadings as in the colors of the spectrum. The least violent conflicts correspond to the ultra violet, wars of extermination to the infra-red. Here again Clausewitz' thought seems unassailable.

Only when we turn from his admirable definition of war and his equally admirable classification of its different forms to his analysis of military objectives and methods does controversy become possible. Even here his thought is so powerful, lucid,

and orderly that those who differ with him can hardly do so more effectively than by commenting on his work. Even those who deplore his influence must study him because of his enormous effect upon warfare to this day.

For Clausewitz there were three principal objects in war: "(a) to conquer and destroy the enemy's organized forces; (b) to seize his material resources; and (c) to gain public opinion." Today it appears that the order should be reversed; that the fundamental object is to convince enemy opinion that total or partial surrender is preferable to going on. Thus the "destruction" of hostile forces and the seizure of resources are really means to the end of gaining opinion. Clausewitz' order of objectives subordinates the end to the means.

The error was natural, for usually resources can be seized and opinion gained only after beating the enemy's main army; but it was big with consequences, the more because of an ambiguity as to the meaning of "destruction." Like all educated soldiers, Clausewitz understood the distinction between the military "destruction" of a hostile force and its actual destruction by wholesale massacre. In a military sense a force is destroyed when its effectiveness as an instrument of combat is gone, when its will power has been crushed, or when for any other reason it is no longer under the control of its Chiefs. Actual destruction is not the only means toward disorganization or surrender. Clausewitz' own time had seen Mack, surrounded in Ulm, surrender to Napoleon almost without fighting. The British plan of campaign for 1919 was to be built around the idea of striking at the German command with planes and tanks; much as Alexander at Arbela had struck at the Great King, dissolving the huge Persian force, most of which had not fought at all. To-day an army incapacitated by some temporary gas might conceivably be taken prisoner to a man without a single casualty.

Unfortunately for the world, the great Prussian philosopher of war, seeing in actual destruction the usual means toward military "destruction," insufficiently emphasized the distinction between the two. Indeed he seems sometimes to have confounded them in his own mind. Again the error was natural; in most serious modern conflicts both sides have lost heavily.

It was none the less disastrous, since it made Clausewitz despise the attempt to win by skill without heavy sacrifices. For him nothing was more ridiculous than to say that "...there is a skillful method of disarming and overcoming an enemy without great bloodshed, and ... this is the proper tendency of the art of war." Pushing contempt still further, he went on: "We do not like to hear of generals who are victorious without the shedding of blood. If bloody battling is a dreadful spectacle, that should be the reason to appreciate war more and not to allow our swords to grow blunt ... through humanitarianism until someone steps in with a sharp sword and cuts our arms off our body." He did not see that the Eighteenth Century idea of skillfully minimizing losses, weighing carefully in Jomini's fashion the chances of the profit from an offensive against the probable loss to be endured, might be more than mere humanitarianism, might indeed be mere self-interest enlightened by common sense.

Another closely connected error, this time one of emphasis, distorted his teaching as to the relation between the object of a war and the degree of military effort which the attainment of that objective was worth.

He saw the point clearly; in his chapter on "The Magnitude Of The Object Of The War And The Efforts To Be Made" he says: "...the proportions of our own and his (i. e. the enemy's) political demands, insofar as these are mutually known, ... will give the measure of the mutual efforts. ..." And a few lines further on: "As in war the want of sufficient exertion may result not only in failure but in positive harm, therefore the two sides respectively seek to outstrip each other, which produces a reciprocal action. This might lead to the utmost extremity of exertion if it were possible to define such a point. But then regard for the amount of the political demands would be lost, the means would lose all relation to the end, and in most cases this aim at an extreme effort would be wrecked by the opposing weight of forces within itself." Here is 1914-18 with a vengeance!

Unhappily for the world this great man far more generously developed the other side of his thought. For one such passage like that just quoted we find a dozen which tell in the opposite

sense, speaking of "violence pushed to its utmost bounds," praising the willingness to sacrifice, demanding immediate battle. For him "... the combat ... (is) ... the real activity in war." Again, "The combat is the real warlike activity, everything else is only its auxiliary." "We may reduce every military activity in the province of strategy to the unit of single combats." "The close combat, man to man is ... to be regarded as the real basis of combat." "The bloody solution of the crisis, the effort for the destruction of the enemy's forces, is the first born son of war." "Only great general actions can give great results." "The more war is in earnest, the more it is a venting of animosity and hostility." And so on. Accordingly he hymns the combative emotions, boldness, energy, and resolution, irrespective of cost. If we use our power to the limit, putting all available forces to their extreme limit of tension, concentrating for the decisive shock, never losing time and taking advantage of success with the greatest energy, then the geometrical or diagrammatic form of the operation is unimportant.

Since great battles mean heavy losses, Clausewitz even more emphatically than Jomini demanded numbers: "The best strategy is to be very strong, first generally, then at the decisive point." "... in ordinary cases ... an important superiority of numbers ... will ... insure victory."

Never does he seem to see that victory might be too dearly bought. He is content to say: "He who uses force unsparingly, without reference to the bloodshed involved, must obtain a superiority if his adversary uses less vigor in its application." Even in his passage on excessive effort he seems not to have asked himself what would happen if two fairly equal opponents strained every nerve to raise the largest possible armies and if the war were prolonged. Undoubtedly, writing in a Europe thoroughly sick of adventures, such questions never entered his head. At all events he did not sufficiently dwell upon the homely proverb "two can play at that game"—which he himself had heavily phrased as "producing a reciprocal action." One wishes that he had had before him Sherman's monumental saying "the legitimate end of war is a more perfect peace." Probably the lucid and systematic Prussian could hardly

imagine a world capable of sacrifices so irrationally great that the bleeding victor would faint upon the corpse of his victim.

The reason both for these errors of Clausewitz and for his enormous influence upon the coming Century was that both he and that Century were romantic. Far more than Jomini he went with the main current of contemporary thought. His constant praise of the spirit of sacrifice reminds us of the fashionable romantic cult of gloom and suicide. A more classical and rational era would have taken to heart Napoleon's fall. The Nineteenth Century, constantly confusing means with ends, mourned that fall instead of despising the megalomania that had caused it. The mere noise of great deeds made romanticists forget the subsequent misery. To Clausewitz himself Napoleon was almost a god.

In time the romantic error of emotional unrestraint, exalting mere instinct over reason, was to exact a heavy price—not yet fully paid. For nearly a century after Clausewitz' death, however, the reckoning was to be postponed.

* * * *

Looking backward over the vast affair we seem to be watching some Greek tragedy in which an act, once committed, will inevitably drag its author to an unforeseen and long postponed but inexorable doom. In an exhausted and disillusioned Europe here was Jomini seeing clearly the Revolutionary-Napoleonic excesses and yet on the whole endorsing the costly, ultra-violent Revolutionary-Napoleonic way of making war. Here was Prussia, poor, frightened and at the same time ambitious, full of her intense but narrow patriotism. Here was Clausewitz constantly stealing away to his study in the *Kriegs Schule*, his face so red from the frost bite of terrible winter campaigns that the young officers used to think he was going off to drink alone, but all the time quietly systematizing his praise of numbers, sacrifices, boldness, battles won by great offensives pushed home regardless of loss. How could either foretell what was to come? Around the elderly Jomini were the docile Muzhiks of Russia, about Clausewitz were the cloddish Prussian peasants, grubbing contentedly in the earth under

the shouted orders of their overseers. With such creatures before them, neither man, least of all Clausewitz, could imagine for a moment that mass armies meant democratizing war, that the murderous substitution of numbers for quality on the battlefield would end by shaking the whole social order, that the search for victory by means of armed and uniformed mobs mad with hate must mean mob rule everywhere.

* * * *

All this, however, was far in the future. For the moment not Clausewitz but the more moderate Jomini had the cry. And until after 1871 the French army, although raised by a sort of conscription, yet with its long term of service, its many reenlistments and its lack of trained reserves, remained essentially a professional, high quality force.

Between 1815 and 1848 Western and Central Europe saw no serious disturbance. The campaigns of the French regulars in Spain, Belgium and Algeria were not severe military tests. Both the French and Belgian Revolutions of 1830 merely replaced one King by another with little bloodshed. In the best Eighteenth Century manner, the French commander who in 1832 besieged a Dutch garrison in the citadel of Antwerp agreed with his Dutch opponent not to fire on or from that sector of the citadel which faced the town, precisely as Marlborough in 1709 had done when besieging the citadel of Tournai. Thus hardly more than a hundred years ago, Antwerp was spared. The names of both commanders deserve honorable mention; the Frenchman was Marshal Gerard, the Hollander General Chassé. One may contrast their conduct with that customary to-day.

In 1848, however, Europe moved. In northern Italy and in Hungary there was some real fighting between organized forces, and although the conflicts elsewhere were mere popular insurrections, they were important as signs that popular passions were everywhere beginning to boil again. In both France and Prussia, moreover, these disturbances had important military consequences.

In France the insurrections of 1848 led within a few years to a democratic Caesarism under Napoleon III, a nephew of

the Great Napoleon who took his uncle's title of Emperor and followed an aggressive foreign policy but retained as his military instrument the professional army existing in France since Waterloo. As Monteilhet the historian of French military institutions observes, the introduction of universal suffrage should logically have been followed by that of the universal service recommended by two successive Ministers Of War. The left wing parties of the day clamored for the equal right of all citizens to get themselves killed. The philosopher Renouvier wrote a pamphlet called "A Republican Textbook Of Manhood and Citizenship" praising universal service, which Hippolyte Carnot, Minister for Education under the Republic of 1848 and son to the Carnot of 1793, distributed throughout the schools. Nevertheless the opposition to universal service, centering about the unwarlike but dominant middle and especially lower middle class, easily prevailed. Thiers, whom we shall meet again, said acidly: "The society in which everyone is a soldier is a barbarous society." Hippolyte Carnot had to resign, and the Constitutional Convention of 1848 defeated the left wing proposal for universal service by 663 votes to 140.

In Prussia the rioting of 1848 showed the landwehr to be imperfectly disciplined; many of its units wavered through sympathy with the Revolutionaries. Two years later when mobilizing against Austria in a quarrel over the leadership of the Germanic Confederation, the same weakness appeared, so that without fighting the Prussian government was forced to a humiliating surrender. Evidently the Prussian army needed reform.

Meanwhile the material conditions of civilization and therefore of war were beginning to change more rapidly than they had done since Europe had learned to make gunpowder and to smelt gun-barrels. The conquest of nature through the advance of physical science had produced machines. The manufacture of goods by machinery made possible a great increase of population. Between 1800 and 1850 the French had increased from twenty-six to thirty-five millions, the Germans from twenty to thirty-five millions, the British from nine to eighteen millions. Communication had been revolutionized by the telegraph and transportation by the steam railroad. Al-

though steamships had not yet superseded sail, nevertheless the steamship was beginning to count.

In each case not the invention but the general use of a new device would make the difference, especially as to weapons. Here the fundamental change was the general use of rifled firearms.

It had long been known that the cutting of spiral grooves in the inner surface of a gun barrel would make the projectile, when fired, spin on a horizontal axis and thereby achieve accuracy at ranges over which only the most gigantic targets could be hit with a smoothbore. As early as 1742 an Englishman, Benjamin Robins, had written: "... whatever State shall thoroughly comprehend the nature and advantage of rifled barrel pieces, and having facilitated and completed their construction, shall introduce into their armies their general use, with a dexterity in the management of them, will by this means acquire a superiority which will almost equal anything that has been done at any time by the particular excellence of any one kind of arms, and will perhaps fall but little short of the wonderful effect which historians relate to have been formerly produced by the first invention of firearms."

In the American Revolution, German and especially American riflemen had dominated all skirmishing and sniping. At a hundred yards men using smoothbore muskets could hit a single man only by persistent firing. At two hundred yards one might as well shoot at the moon. Good American riflemen, however, could hit a man regularly at two hundred, and make fifty percent of hits at three hundred, together with many far more amazing feats. In the Peninsular War the British rifle brigade had done good service.

Nevertheless technical difficulties had long prevented the general adoption of rifled muskets. With all muzzle loading rifles, except perhaps the American squirrel or Kentucky rifle, loading was difficult and slow. If the bullet was small enough to be rammed easily down the muzzle upon the powder-charge, then it was too small to take the rifling grooves. By mid-Nineteenth Century, however, rifle bullets which solved this difficulty were in general use as infantry weapons. By giving

the bullet a conically pointed tip and a conical hollow in the base, the explosion of the powder expanded this base into the rifling grooves, thus making the bullet rotate and at the same time acting as a gas check to prevent the useless escape of the powder gases through these grooves.

Rifled artillery, which soon became breech-loading as well, was also introduced, doubling or more than doubling the range. Where the ordinary smoothbore field gun, the twelve pounder, when firing round-shot had an effective range of about eleven hundred yards—the effective case-shot range, as we shall see in a moment, being much less—the earliest rifled pieces had an effective range of from twenty two to twenty six hundred. The rifled field gun, however, was to affect tactics more slowly than the infantry rifle; artillery replacement was delayed by its greater cost, and the tactics of the more technical arm were more slowly learned.

As anyone could see, general use of the infantry rifle must strengthen the defensive by making frontal attacks more difficult. Since the beginning of time the defensive, although seldom capable of achieving positive results, had always been the stronger form of war; the defender can await attack on ground of his own choosing and can strengthen that ground by fortification so that he can fight more effectively than the attacker. Obviously an increase in the effective range of weapons widens the zone of fire which the assaulting infantry—themselves no stronger, faster or less vulnerable than their ancestors—must cross before reaching the defenders.

In particular the infantry rifle would make it impossible to prepare infantry attacks by smoothbore artillery fire using the "case-shot attack" in Napoleonic fashion. A case-shot was composed of a number of bullets enclosed in a thin metal box or case which could be fired from a cannon but would burst on striking the ground, scattering the bullets. The attacker's batteries would gallop up, unlimber just out of effective range of the defender's smoothbore muskets, and play upon his motionless and close formations of standing infantrymen. For the latter to advance against the guns was to abandon their prepared position and expose vulnerable flanks and rear to the assailant's cavalry. Indeed as a precaution against cavalry

attack the defending infantrymen usually stood in squares, which formation further hindered their mobility and hence their power to counterattack. To lie down was to be unable to reload a muzzle loading piece, for the powder charge had to be poured down an almost upright muzzle before the bullet could be rammed down upon it. To scatter as skirmishers was to reduce the volume of fire, so that one must retire before any serious infantry attack and could be cut to pieces by a cavalry charge. Accordingly the case-shot preparation could go on until either the assailant judged that preparation sufficient or his munitions gave out.

Now all this was about to change. Although the ordinary smoothbore field gun, the twelve pounder, had an extreme case-shot range of twelve hundred yards, it could get little effect with case beyond four hundred. Against the old smoothbore muskets which at their best could hit a single man only twice out of five shots at hundred yards, and a target twice as high and twice as broad as a man at a hundred and fifty with perhaps three out of four shots, this had done well enough. The new infantry rifles, however, were sighted up to a thousand yards, and were fairly accurate up to six hundred and fifty. Though the infantryman must still stand to load, at four hundred yards the gun crews of batteries attempting a case-shot attack had no chance at all. Consequently smoothbore guns could no longer adequately prepare an assault, and it remained to be seen whether rifled cannon could do so. In the next series of wars the attacking artillery, held far back by the defender's rifle fire, usually failed even to put the defending guns out of action. Thus when the assaulting infantry advanced they found themselves under both the rifle and gun fire of the defenders.

While the effects of industrialism upon military technique were beginning to be felt, the next wars showed that the political and social lessons of the Revolutionary-Napoleonic butcheries had already been forgotten. Again feverish popular passions could be cooled only by bloodshed. In Europe the first cause of the coming struggles was nationalistic French democracy under the typically democratic Caesar Napoleon III, the second was to be German nationalism under the leader-

ship of Prussia. Ironically enough, as we have seen, Napoleon III's armies were chiefly professional, whereas Prussia, while denying equality at the ballot box, recognized it fully on the battlefield through her nation in arms.

The curtain raisers of the new series of conflicts were the Crimean War of 1854-'5 and the Franco-Austrian War of 1859.

The primary cause of the Crimean War was Napoleon III's unnecessarily taking up the quarrel of certain Roman Catholic Monks in Palestine with certain Eastern Orthodox Monks who in turn were backed by Russia. This resulted in a Russian attack upon Turkey who was joined not only by France but also by England and by the little Italian state of Sardinia or Piedmont. The three West European Allies sent Expeditionary Forces to the Crimean territory of Russia across the Black Sea. It was not a war of total overthrow in the Revolutionary-Napoleonic and Clausewitzian sense, but one fought for a limited political object; the Russian purpose being to attack Turkey and in no way to molest the Western Allies, while the latter intended not to disarm Russia but merely to preserve the territorial integrity of Turkey. In this first war between great powers since Waterloo the British and French infantry were both armed with rifles, and steam vessels were used to some extent in the naval fighting. Other developments of the industrial revolution if not used were at least proposed: an Englishman, the Earl of Dundonald, who had already suggested poison gas during the Napoleonic period now put forward the same idea again, another Englishman, James Cowen, conceived the idea of a tank in the form of an armored steam traction engine fitted with scythes, and a German, Bauer, built a large submarine which he offered to Russia. The new inventions actually used had no great effect: the steamboats merely towed the sailing warships into position for a not very effective bombardment of the Russian coastal forts, and the rifle-carrying French and British infantry fought in the time honored formations appropriate to the old smoothbore musket. The Russians hardly used their smoothbore muskets as fire weapons at all, preferring bayonet attacks in close formation. Most of the land fighting was what we should call trench war-

fare or position warfare around the fortress of Sevastopol, the besiegers entrenching themselves in their turn.

Nevertheless the Crimean War was not without its effect upon theory. Although Clausewitz, dying in 1831 had not concerned himself with the new weapons, Jomini, living until 1869 and vigorous even in extreme old age, twice did so. Already in 1836 in his "Art Of War," although mistaken as to the particular new weapons which would prove practical, he had shown himself justly impressed with the general possibility of increased fire power, writing: "The new inventions of the last twenty years seem to threaten a great revolution in army organization, armament, and tactics. . . . The means of destruction are approaching perfection with frightful rapidity . . . (they) . . . will multiply the chances of destruction, as though the hecatombs of Eylau, Borodino, Leipzig, and Waterloo were not sufficient to decimate the European races. If governments do not combine in a congress to proscribe these engines of destruction, there will be no course left but to make one half of an army consist of cavalry with cuirasses, in order to capture with great rapidity these machines; and the infantry, even, will be obliged to resume its armor of the Middle Ages, without which a battalion will be destroyed before engaging the enemy. We may then see again the famous men-at-arms all covered with armor, and horses also will require the same protection. While there is doubt about the realization of these fears, it is, however, certain that artillery and pyrotechny have made advances which should lead us to think of modifying the deep formation so much abused by Napoleon."

Of course the check upon the reintroduction of armor was the limited power of men and horses to move freely and to cross obstacles while carrying weight—a difficulty solved by the Twentieth Century tank.

After the Crimean War Jomini again considered the question of the new fire power, this time in connection with the infantry rifle. When asked whether the recently improved firearms would greatly modify war, his answer was partly true and partly false. Somewhat as Machiavelli had rightly seen infantry as the principal arm but had said that artillery would remain valueless in the open field; so Jomini saw that the rifle

would influence tactics, but failed to appreciate how much it would do so, or how the new tactics would in turn alter strategy. While strategic principles are in a sense permanent, their practical application to any given case must always depend upon tactics which are merely the technique of combat, which in turn is a detail of the greatest importance to strategy. Trench fighting like that around Sevastopol could never occur again on such a scale, the Swiss theorist thought. Moreover ". . . this contest of cannon with ramparts, bearing no resemblance to regular pitched battles fought in the center of a continent, cannot influence . . . the great combinations of war nor even the details of tactics." On the other hand, he foresaw enough of the tactical effect of the rifle to ask "Will whole armies be deployed as skirmishers . . . ? Will battles become mere rifle duels, firing without manoeuvring until one side retreats or is destroyed?" On the whole his answer was no. Having seen in the great battles of his youth how skirmishers escape from the control of their higher commanders, he wrote: ". . . to decide battles, manoeuvres are necessary, and that General will win who manoeuvres most skillfully." And again: "In spite of improved firearms, armies will not fire at a distance all day, one will always have to advance to attack the other." Accordingly he recommended much target practice and the training of many, if not all, infantry as skirmishers with the rifle; but at the same time advised the use of small company columns in order to keep the men under control for manoeuvring. Remembering again, this time perhaps a little dimly, the vast Revolutionary-Napoleonic combats with smoothbores, he said: "The skirmishers made the noise but the columns carried the position." How imperiously the rifle bullet would dominate battlefields he did not see.

Technically the next contest, the Franco-Austrian War of 1859, the first in which the infantry of both sides was armed with rifles, seemed to mark a certain retrogression.

Politically it was caused like the Crimean War by Napoleon III, this time because of his sympathy with Italian nationalism in its desire for unity and independence. Again like the Crimean War, both contestants fought for limited political objectives; the French, allied with the Piedmontese, desiring

merely to drive the Austrians from Italy, Austria wishing only to hold her Italian provinces.

Railways might have played a part, for the Austrians had rail connections across the Alps with Italy while the French had not. Consequently the Austrian troops already with the colors might have been rushed forward to deal with the Piedmontese before the French could come. Nothing of the sort was done.

The numbers mobilized were not impressive. For the opening engagements Austria had only seventy five thousand, which figure was gradually doubled by the arrival of reservists, and Piedmont a mere sixty four thousand. Out of a total strength of half a million the French, having to garrison Rome for the Pope, and Algeria for themselves, as well as to consider both England and Prussia as possible enemies, put in the field only a hundred and thirty thousand.

The campaign was short; the first fighting began late in April and peace was signed early in July. Of the infantry rifles the Austrian was superior. The French, for the first time in war, used rifled cannon. Also they habitually fought in skirmish lines. Indeed since the regulations of 1831 their official doctrine had made such lines the chief if not the only formation for troops in actual combat. At the same time the decisive thing seemed to be not the new weapons but the dashing French bayonet charges.

On the Austrian side, both in war and peace the kindly ghost of the Eighteenth Century walked again for the last time. The first Austrian advance against the Piedmontese was slow, not only because of the irresolution of the Austrian government but also because of old fashioned insistence on feeding the soldier well and not pillaging civilians. If this conduct turned against its authors, on the other hand the moderation of the Austrian Emperor, Francis Joseph, in making peace spared Europe the calamity of a general war. His armies, although beaten, were far from destroyed, and he still had large resources available for continuing the struggle, besides good hope of gaining England and especially Prussia as allies. Prussia was already mobilizing on the Rhine. A democratic and nationalist government, enslaved to popular passion,

would not have been free to negotiate while hope remained of driving its enemies from the territory they had seized. In the best manner of the sovereigns who had presided over the rational Eighteenth Century wars, the young Francis Joseph said calmly: "I have lost a battle, I pay with a province"—and signed a treaty ceding Lombardy.

Moderation has since been conspicuous neither in war nor in peace.

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When the Prussians mobilized in 1859 they found once more the same grave defects in their army which had already appeared in '48 and '50. In 1860 therefore they began reforms which were to prove epoch making. But before the new Prussian army smelt powder, the Revolutionary-Napoleonic horrors reappeared in the American Civil War.

Politically and socially the Civil War fitted the Revolutionary-Napoleonic formula at every point: fierce popular passions, mass armies, and a grinding struggle ending in the exhaustion and collapse of the beaten side.

The contest was more like a war between two separate countries than are most civil wars, since it was fought between two distinct geographical sections, the North and the South; whereas most such struggles are between two political parties both possessing considerable numbers everywhere. It also resembled national wars because the political issues were of long standing and clear cut, changing little from beginning to end.

The underlying issue was the presence of negro slaves in large numbers throughout the southern states, thus differentiating the economics, morals and culture of the two sections. The immediate issue was whether the Federal government represented a real and indivisible sovereignty supreme over the sovereignties of the separate States, or whether States still possessed the moral and legal right to "secede," that is to withdraw, from the Union at their pleasure. We need not here decide the difficult balance of these moral and legal questions which had been hotly debated for a generation. Both sides passionately believed in their own good right. With

varying degrees of intensity the North held slavery to be contrary to the spirit of traditional christian morals, which still dominated law and custom in the Protestant societies. A small but noisy and influential Northern minority was fanatically against slavery and would commit or at least approve any crime in attacking it. The South on the contrary urged the strong case which can always be made on behalf of slavery, the advantages of leisure and stability conferred upon all society by the uninterrupted labor of slaves, together with the advantage to the slave himself of having a master whose direct personal interest was to have his human property well cared for. In that respect the status of the slave might be called better than that of the laborer under the industrial capitalism already strongly rooted in the North. Also Southerners rightly saw Federal centralization as a tyranny threatening their beloved local liberties and way of life.

The popular passions roused by all this resulted in no disgusting massacres of prisoners and civilians like those of the French Revolution. John Brown the bible-reading murderer and his handful of anti-slavery fanatics would indeed have delighted to massacre, but most Americans were either milder or more chivalrous. The vilest crimes on both sides were done in the comparative secrecy of prison camps. Northern and Southern soldiers, especially regular officers who had known each other before the war, were often conspicuously courteous to their enemies.

Nevertheless the popular passions were there; no one can miss the religious exaltation of songs like "John Brown's Body" and "The Battle Hymn Of The Republic," and such passions inevitably gave the war a ferocious intensity. We shall see their fruit in the cold savagery of the blockade and in the wholesale devastations of Sherman.

As always, resources and political motive determined strategy. Besides being far richer than the South, the North had about twenty two million people, while the South had only about five and a half million whites and three and a half million slaves. Moreover the Southern purpose, independence, would be achieved by a successful defense, while the North could restore the Union only by a successful offensive.

The North therefore sought to invade, and when its first attempts at invasion failed it also invested—that is blockaded—the South. By land the South was of course invested from the beginning, by sea the investment must be naval.

In the beginning the Federal navy had 90 ships, of which 42 were in commission, most of them on foreign stations, and 1576 commissioned officers of whom about one fifth entered the Confederate navy after resignation or dismissal. Before the end 475 Federal vessels were in service on blockading duty alone. On their side the Confederates had to improvise a navy. Under the ingenious and energetic leadership of former United States naval officers they fitted out commerce destroyers and occasional heavier vessels to attack the blockaders or at least to help defend Southern ports. With the slender naval resources of the South, however, little could be done. The blockade went relentlessly on.

In scope and effectiveness such a blockade was a new thing. Former blockades of entire countries, culminating in the English blockade of Napoleonic Europe, had influenced war by embarrassing their victims but had never had a strangling effect. Now a vast territory with nearly three thousand miles of coast was shut in upon itself as no area larger than that of a besieged city had ever been.

The Industrial Revolution worked against the South in two ways. The blockading ships, steam propelled and therefore largely independent of the winds, reduced Southern overseas trade to a mere trickle dangerously carried on by blockade runners. Even this dwindled as port after Southern port fell into Northern hands.

The Industrial Revolution also made many large areas more vulnerable to blockade than ever before because it concentrated manufacturing in certain regions, making the economy of other regions depend upon products manufactured far away. Of these dependent districts the American South was one. Largely agricultural, it was accustomed to pay for its imports of metals and finished goods by exporting tobacco and especially cotton. Nearly three million bales of cotton were exported in 1861, less than a twentieth of this in '62, and not much more than a twentieth in '63, afterwards still less. In-

sofar as it checked the export of cotton the blockade might have proved a two-edged sword, for the shortage of cotton hindered European textile industries, especially in England, thus encouraging the South to hope for foreign intervention. But insofar as it prevented importation into the South it was an unmixed evil, steadily thrusting the Confederacy deeper into poverty and want.

Some effects of the blockade were felt from the beginning; in the first year the North imported nearly seven hundred thousand firearms, while in the first two years the South seems to have secured less than two hundred thousand. There were also grave Southern shortages of leather, horseshoes and powder. So acute was the original Southern shortage of rifles that flint-lock smoothbores had to be issued to some of the troops, and others could get no firearms at all. By the end of '62 an adequate supply of powder was being manufactured, while the want of rifles had been made good by manufacture with salvaging from the battlefield. On the other hand, essentials like artillery, shoes, harness, blankets, hats, lead, and medicines, could never be adequately provided. At one time, three thousand men in a single Confederate Army Corps were barefoot. Want of iron for farming tools decreased the amount of food available, and at the same time gradually crippled the railroads until they could not properly distribute such food as there was. Want of money compelled the issuing of unbacked paper money which depreciated enormously in value. Inflated currency together with genuine scarcity produced fantastic rises in price: \$45.00 to \$350.00 for a barrel of flour, \$1.00 for a single quinine pill or loaf of bread, \$60.00 to \$80.00 for a yard of woolen cloth, \$3.50 for a spool of cotton, \$11.00 for a pound of coffee or tea, and \$60.00 for a thousand envelopes.

Such conditions, while cotton which in '62 and '63 was worth only four pence in the Southern ports would fetch two shillings a pound in Europe, attracted private British capital and Confederate government capital to the business of blockade running. Blockade runners made enormous profits. Two successful trips more than paid for a ship, but no skill or daring could lighten the inexorable pressure of the Northern navy.

Human nature being what it is, higher profits could be made from luxuries than from necessities, so that blockade runners used not a little of their scanty space for things like women's silk dresses!

On the legal side the North resurrected the old British prize law of "continuous voyage" which held that liability to seizure was determined by the final destination of a cargo and the intention of its owner to violate the blockade, even though the captured ship's papers showed that she had cleared for a neutral port.

In December '64 just before the end, the main Southern army was so starved that the Southern government bought food in Bermuda but could not get it in because the fall of Fort Fisher in January '65 sealed up the last available Confederate port. Final surrender followed in March.

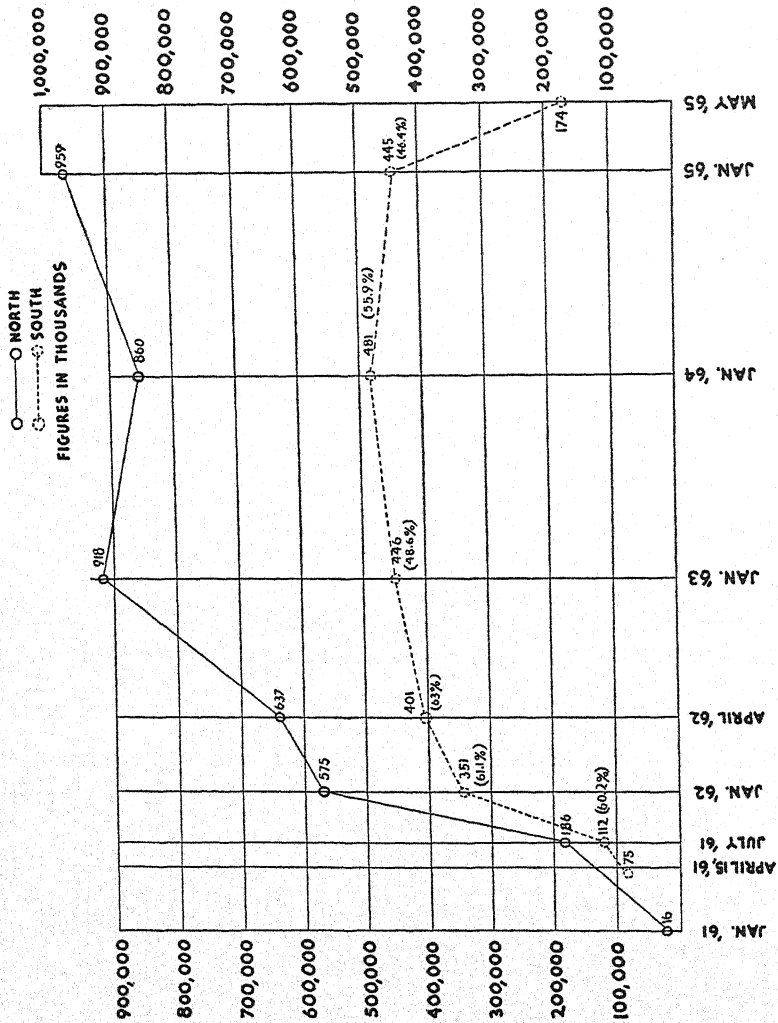
The cold savagery of blockading an entire country needs no argument—all the more because its effects, less dramatic than those of battles, do not so strike the imagination both of contemporaries and of historians. Blockade is a weapon directed more against civilians than against fighting men, and most of all against the weak, children, old people, the poor, and the sick. Nothing like the Northern Blockade of the South was to be seen for half a century.

On land the war conformed to the Revolutionary-Napoleonic pattern, both sides raising mass armies. Both first tried volunteering, then in turn found themselves forced to compel enlistments. The South went to the draft early in '62, the North in '63. In the North, as in the French Revolution before Carnot's time and again in France from Waterloo to 1872, the draft was only selective. From the Northern population of twenty two million all males from eighteen to forty five were made liable for service and forced to enroll, those from twenty to thirty five constituting the first class and the remainder the second class; but none of the second class were compelled to serve, and of the first class only a certain number whose names were drawn by lot. As in France during the periods just mentioned, drafted men were allowed to purchase substitutes. Volunteering and conscription together brought nearly three million men into the Federal army. Allowing for

the short terms of many earlier volunteers and for the short conscript terms served by those drafted toward the end of the war, this large number is reduced to the equivalent of little more than a million and a half for three years, but even this lesser figure is nearly seven per cent of the whole Northern population—a notable military effort for a people not originally conscript.

The Southern effort was proportionately even greater. Exactly how great it was can never be known because of the absence of full record, but under ever stricter conscription laws, culminating in one which made all white males from seventeen to fifty liable for service, all available man power was used to the uttermost. In February '65 the Confederate conscription bureau reported less than eighty eight thousand exempted men of military age in the remaining Confederate territory east of the Mississippi. Without wearying the reader with the intricate estimates necessary, suffice it that from the Southern white population of about five and a half millions—which would give a maximum male population of military age of about a million, certainly very little more and perhaps less—the most careful estimator concludes that more than a million two hundred thousand men passed through the regularly enrolled Confederate army. Labor was furnished by negroes, setting white men free for the army. Boys and old men of non-conscript age came forward freely. In short the South fought to its last gasp.

The numbers carried on the rolls of the respective armies are shown on graph. See page 160.



CIVIL WAR STRENGTHS ON ARMY ROLLS

Figures from Livermore. Figures from Upton. Percentages in brackets equal Southern Percentage of Northern Strength

Both troops and commanders improved with time. At first the men were undisciplined, and the commanders—except Lee to whom we shall come in a moment—were unaccustomed to handle more than very small numbers. From the beginning however both sides fought with astonishing bravery and determination, while their discipline, although never reaching the standard of long-service regulars, nevertheless became better. Those of the officers who rose to High Command were invariably regulars who had received a good military grounding and seen some service. In general the operations began crudely and achieved coherence with practice.

The land theatre of war was divided into three strategic zones or belts: from the Atlantic to the Alleghanies, from the Alleghanies to the Mississippi, and from the Mississippi westward—this last region being of secondary importance. The eastern zone was important politically because it contained both capitals, the Federal at Washington and the Confederate at Richmond only a hundred miles away; economically since the largest Southern iron works were in Richmond, and the only lead mine in the Confederacy was at Wytheville near the southwestern corner of Virginia. On the other hand the central zone had the great artery of inland water communication, the Mississippi. Also the greater part of the politically doubtful territory roughly known as the Border States lay between the Mississippi and the Alleghanies.

The chief military and political events were as follows: first a stalemate in the eastern theatre for three years, the South repeatedly defeating the Northern armies but unable either to crush those armies or to gain territory. Meanwhile the North won a succession of victories in the west, culminating in a division of the Confederacy through Northern occupation of the entire Mississippi. The slave-holding but non-seceding Border States were consolidated by superior Northern resources and initiative. The Confederate President Davis failed to support his partisans in those States, lest his purpose of maintaining Confederate independence might seem morally weakened by operations which could be called campaigns of conquest. On the other hand Davis allowed certain Confederate commanders to enter Kentucky and fortify positions there, so that the Fed-

eral invasion of the State—which had tried to remain neutral—could be represented as a move to free it from these Southern invaders. In losing the Border States the South lost valuable territory and potential man power. Moreover the Northern successes there discouraged European intervention. In the fall of '62 Lincoln's proclamation emancipating the slaves of rebels also made it morally difficult for the European powers to intervene. In '64 came the political crisis of a presidential election: had the peace party in the North succeeded in preventing Lincoln's re-election, the South would have won the war. Moreover the Union armies in the east were still unable to crush the Confederates there. On the other hand, Union successes in the west continued. Lincoln was re-elected, and before the end of the year the South, already divided by the loss of the Mississippi, was further divided by Sherman's march across Georgia to the Sea. The spring of '65 saw the Confederacy collapse.

We may pause for a moment over the Bull Run campaign as typical of the early operations, then take Shiloh and Gettysburg as typical of the middle years, and conclude with the last stand of the Confederacy in '64 and '65.

Bull Run was fought as a result of a direct Federal move forward from Washington toward Richmond. The number of Federals actually on the field was under thirteen thousand, of Confederates fourteen thousand. On both sides discipline was slack, commanders inexperienced, and staff work wretched. The difficulties of the offensive and the ability of certain Confederate leaders of units, notably "Stonewall" Jackson then commanding a brigade, decided a confused engagement. After coming close to success, the Federals, once started to the rear, broke and fled until they reached the defenses of Washington some eighteen miles away. A few detachments of regulars alone covered the retreat. Meanwhile the Confederates, exhausted and almost as much disorganized by victory as their enemy by his defeat, made no effort to pursue. None the less the Federals had lost over ten per cent in killed and wounded before they broke, and the Confederates over fourteen per cent—heavy losses for raw troops and prophetic of the fierce fighting which was to be typical of both sides throughout the War.

That the Confederates for four years after Bull Run were able to hold in the eastern theatre was due chiefly to the ability of Robert E. Lee. He alone of the Federal officers still in the prime of life, knew something of the management of troops in considerable numbers through his service on the Headquarters Staff of the Army which had successfully invaded Mexico in 1848. Considered the most brilliant man in the United States service, he was offered the command of the Federal armies, but refused in order to serve his own State of Virginia. Early in '62 he was given the main Confederate army between the Alleghanies and the Sea. Skillful and extremely bold in manoeuvre, suiting his combinations to his personal knowledge of successive Northern commanders, he won victory after victory. On the other hand he was never able to destroy the sturdy Federal army opposed to him. He lacked resources, nor could he sufficiently control and co-ordinate the work of his chief subordinates. In '62 with about sixty seven thousand men he opposed McClellan who with over one hundred thousand men was moving on Richmond from the southeast. Correctly estimating McClellan's low initiative, he suddenly brought the brilliant "Stonewall" Jackson with an additional eighteen thousand men some sixty miles down upon McClellan's flank, rolled up the Union army and might have destroyed it, only to see his prey escape him through two fits of lethargy on the part of Jackson who, after a brilliant approach march, inexplicably delayed his attack for twenty four hours, and shortly afterwards wasted another critical day.

In the west along the Mississippi and between that river and the Alleghanies most of the Federal successes were due to Ulysses S. Grant, a former regular who had left the service before the War under an ugly suspicion of drunkenness but a commonsense fellow of enormous tenacity and moral courage who learned steadily and would never admit himself beaten. The most critical of Grant's early fights was Shiloh in April '62. He had recently cleared western Kentucky of the enemy and had advanced into western Tennessee with about forty thousand men. Buell with another Union army of about half as many was approaching. Grant's intelligence and re-

connaissance, however, were defective and his troops were not entrenched. Accordingly, when suddenly attacked by a Confederate army of his own strength under Albert Sidney Johnston, he soon found himself in a critical position. Had the Confederate order of battle been more skillfully planned, the Federals might have been driven back against the Tennessee river and destroyed. Johnston, however, erred in deploying his three Corps one behind the other, so that each reinforcing unit found itself mingled with men of another Corps. This, together with the inherent difficulties of keeping order among green troops in a sustained attack, permitted the hard fighting Federals to save themselves. Grant himself, as always full of fight, had communicated much of his own high spirit to his division commanders who resisted stubbornly. Toward the end of the afternoon Johnston, finding his attack flagging, led a charge and was killed, which misfortune increased the confusion in the Confederate command. The Confederates therefore threw an undue proportion of their force against a single Federal division which had not conformed to the retreat but was holding out in a naturally strong point called the Hornets Nest. The sacrifice of this division helped to save the rest of Grant's hard pressed units. Toward nightfall the tired Confederates withdrew to reorganize, just as Buell's leading units arrived. The rest of Buell's troops arrived during the night, and next day Grant and Buell together drove the Confederates from the field but were unable to pursue. Both sides had lost nearly a quarter of their force.

Next year, '63, Grant, now in command of all Union troops between the Mississippi and the Alleghanies, opened the great river by taking Vicksburg, the last Confederate stronghold on its banks, after an extremely bold campaign, at one stage of which he abandoned his communications and marched around the fortress to a new base after a fashion that would have shocked military geometers like Jomini. Thenceforward the Confederacy was cut in two.

During the Vicksburg operation Lee and the Confederate army of Northern Virginia fought and lost the campaign of Gettysburg. The campaign began with another of the repeated Federal offensives toward Richmond, ending in a Southern

victory at Chancellorsville. Jefferson Davis and the Confederate Higher Command then began to discuss plans. Certain generals suggested shifting troops to the west to intervene decisively there. Lee himself favored collecting a reserve army to menace Washington from the south while he himself swung around some fifty miles west and north of the Federal capital. His idea was to advance, and then to fight a defensive battle behind entrenchments on ground of his own choosing. In the event the shift to the western theatre was not made nor the reserve army formed. The army of northern Virginia, about seventy thousand, went forward alone across Maryland and into Pennsylvania. Lee having detached his Chief of Cavalry, Jeb Stuart, on a raid, was for a critical week without the immediate services of that able officer, and consequently lacked his usual accurate information of Federal movements. Meanwhile the Federal army of the Potomac, about eighty thousand strong and with more artillery than Lee, was swinging around to keep between him and Washington. Notwithstanding its long succession of defeats that army was still full of fight. It was now commanded by Meade, an unenterprising but steady soldier who, like Lee, wanted to fight a defensive battle. Two army Corps on either side blundered into each other at the little Pennsylvania town and important road center of Gettysburg. Driven from the town, the Federals stood on strong ground to the south of it, while the different units of both armies moved toward the scene. In hostile country with a circuitous line of communications and the Potomac river only a few marches in his rear, Lee found himself compelled to attack. For two days he did so but without success. He himself afterwards wrote of the action: "It was commenced in the absence of correct intelligence, . . . and would have been gained could one determined and united blow have been delivered by our whole line." His control over his chief subordinates, especially Longstreet, was not what it should have been, nor had he been able to train his staff sufficiently to coordinate a general attack by the whole army. These weaknesses, besides the inherent difficulty of frontal attacks upon troops armed with the rifle, finally caused a Confederate repulse after Lee had lost more than a third of his strength, Meade more than a

quarter of his. The Confederates retreated unmolested into Virginia.

In the spring of '64 Grant, now in command of all the armies of the United States, made a broad, strategic plan for ending the rebellion. When attempting military occupation of any large territory the best method—if you can use it—is to cut that territory in two. If you can prevent the separated parts from joining again, you can deal with each part in turn. Such was the British plan for seizing the Hudson in the American Revolution. The same idea was behind the Spanish “trochas” which divided the Cuban insurrection and the British block-house lines in South Africa. The Spanish Nationalists acted in like manner when they divided Catalonia from the rest of Red Spain. Grant himself had been the chief agent in dividing the Confederacy along the line of the Mississippi. He would now divide it again. With the devastation of Virginia, Georgia had become the chief source from which the Confederate armies drew their cereals, and Florida their source of meat. The railroad system of the South had of course been designed without reference to strategy, its chief use had been to take the cotton and tobacco crops to the nearest harbor for export. In northwestern Georgia, less than a hundred miles from where the Union armies now stood in Southeastern Tennessee, was the important railroad center of Atlanta; seventy five miles further to the southeast the railroad junction of Macon. These two points were a sort of waist of the Confederate railway system; through them alone could trains run from Virginia and the Carolinas to Alabama and what was left of Confederate Mississippi. To advance from Atlanta to the Gulf or to the Sea would break the Confederacy.

For the move into Georgia the able Sherman, long Grant's trusted subordinate, was available to command the Western army which Grant had trained. Grant himself would accompany the Army of the Potomac which under Meade would attack the Confederate army of Northern Virginia under Lee. The lesser Federal forces were all to attack vigorously in order to employ every available man actively against the Confederacy. In Grant's own—somewhat clumsy—phrasing: “I . . . determined . . . to use the greatest number of troops practi-

cable against the . . . enemy, preventing him from using the same force . . . against first and then another of our armies, and the possibility of repose for refitting and producing necessary supplies for carrying on resistance; second, to hammer continuously against the armed force of the enemy and his resources, until by mere attrition, if in no other way there should be nothing left to him but . . . submission. . . ." Thus he put the economic objective, the enemy's resources, on a par with the direct military objective of that enemy's armed forces.

Through the spring and early summer of '64 Grant with his Army of the Potomac, although repeatedly checked by Lee, continued to manoeuvre offensively and to attack the enemy even when strongly entrenched. In a single month of fighting the North lost about fifty thousand, the South about thirty two thousand, but in proportion the Confederate losses were heavier, forty six per cent of their original strength of seventy thousand, whereas the Federal loss was only forty one per cent of Grant's original hundred and twenty thousand. Moreover, Grant could and did soon replace his losses while Lee could not.

An interesting sidelight on the effect of electioneering politics upon war was given early in June '64 at Cold Harbor. Here Grant attacked the entrenched Confederates and was repulsed with a loss of about eight thousand. The normal thing to do would have been to send a flag of truce, asking Lee's permission to pick up the Federal wounded lying between the lines. This, however, would have been an admission of defeat which might have affected the coming Presidential election in November. For four days therefore Grant would make no such request, while Lee, equally alive to the political implication, forbade the Federal rescue parties to bring the wounded in.

Late in June trench warfare began on a front of over sixty miles from Richmond to Petersburg and thence westward, to continue throughout the year and into the next. Had the other Union armies fared no better than the Army of the Potomac, Lincoln might have failed of re-election.

Fortunately for the United States, Sherman soon had victories to show. His campaign against the Confederate general Joseph E. Johnston for the possession of Atlanta was in the

best Eighteenth Century manner, both sides acting by manoeuvre and small fights rather than by pitched battles. Repeatedly Sherman, confronted by Johnston in strongly entrenched lines, would use his superior numbers to occupy and entrench a position threatening one of Johnston's flanks; compelling the Confederates either to assault his entrenchments, or to see their own lines dangerously extended in order to meet his threat, or to retreat. Johnston would thereupon withdraw to another entrenched line. Dissatisfied with Johnston's retreating policy, Jefferson Davis replaced him with Hood who attacked Sherman and was bloodily repulsed so that he had to retreat again like his predecessor. Atlanta fell about August 1st, thereby assuring Lincoln's re-election. In November, leaving Atlanta and its railway lines to the North strongly garrisoned, Sherman with fifty thousand men cut loose from his communications, marching nearly three hundred miles southeastward, almost unopposed, to the Sea at Savannah. To divide the South, he systematically devastated a belt of territory some sixty miles wide, ordering ruthless destruction of property but respect for civilian life. The Sea was reached before Christmas '64, as Thomas with rear elements of Sherman's army heavily defeated Hood at Nashville, Tennessee.

Late in March '65, Lee, with his men half starved and his rear about to be threatened by Sherman's approach, broke the trench deadlock in Virginia by retreating westward. Grant headed him off by means of Sheridan with the Union Cavalry Corps. Sheridan dismounted his men, and with their carbines—many of them breech loaders and some magazine rifles—they delayed the Confederates until the Federal infantry had time to come up. Seeing the position hopeless, on April 9, '65 Lee surrendered the remnant of his army at Appomattox, Grant giving generous terms.

Technically the war showed the effects of the industrial Revolution at every turn. In considering the blockade we have noted the influence of steam power upon naval operations. In Grant's strategy we have seen the strategic importance of railways. Not only did the railroads constitute the communications essential to the economic life of an area for the supply of an armed force, they also afforded means for the rapid

movement of troops. Late in '63 a Confederate Corps of ten thousand men was moved nearly a thousand miles from Virginia to the neighborhood of Chattanooga, Tennessee in less than eight days. Almost at the same time a Federal Corps of twenty thousand men was shifted from the Rappahannock river in Virginia to the Chattanooga area, moving by rail over a circuit of twelve hundred miles from Washington via Louisville, Kentucky, and Nashville, Tennessee. The first train passed Louisville, nine hundred miles from Washington, on this same 29th of September, and reached its destination in the morning of October 2nd after travelling for a week at the rate of nearly two hundred miles a day. Compared with the immemorial good day's march of twelve miles for infantry, the contrast is startling. The telegraph—supplemented by the field telegraph which troops could lay as they advanced—sent information and orders hundreds of miles in a few seconds.

Meanwhile weapons and therefore tactics were changing as rapidly as communications. A Federal warship was sunk by a submarine torpedo boat, while both sides competed in manufacturing ironclads. Both devices began feebly enough. The Confederate submarine was sunk by the explosion of her own torpedo and went down with her victim. The first Monitor was unseaworthy and was soon lost at sea. The first Confederate ironclad, the "Merrimac" or "Virginia," was hardly more seaworthy. Under Farragut at New Orleans and Mobile Federal wooden ships showed themselves capable of dealing with equally formidable opponents of the same sort. The significance of both submarines and ironclads was that their measure of success forecast the future. In England Sir John Hay said: "Henceforward the man who goes into action in a wooden ship is a fool, and the man who sends him there is a scoundrel."

The size of cannon so increased and their design so changed that an American authority on ordnance, Commander Bentham Simons, U. S. N., says: "In the . . . American Civil War gunnery advanced almost as much as it had . . . since Roger Bacon first experimented with gun powder." In '62 at Malvern Hill toward the close of the Peninsula campaign the Federal artillery shot the Confederate attacks to pieces so that the Federal infantry were hardly engaged. Rifled cannon and

breech loaders became commonplace. Army artillerymen might prefer the smoothbore muzzle loaders of the sort known as "brass Napoleons" to rifled pieces because the higher velocity of the latter's projectiles tended to bury them harmlessly in the ground before exploding. None the less the superior accuracy and range of the rifled gun was bound to tell in the end.

A host of other new devices were either used or seriously discussed: armored trains, balloons—the Revolutionary French had had a balloon corps which Napoleon had disbanded—flame projectors, long range artillery firing by compass, and submarine mines. When a Confederate general, perhaps remembering the use of stink balls by the Chinese, asked his Chief of Ordnance whether he could furnish "stink-balls" to spread "offensive gases" with "suffocating effect," the latter laconically replied: ". . . stink-balls, none on hand, don't keep them; will make if ordered."

The great change however was that the new tactics due to the infantry rifle became an accomplished fact. Americans are adaptable people with the defects and virtues of "practical" folk. Approaching warfare with fewer preconceived ideas than any European army, they soon saw that exposed targets within effective range were promptly riddled. Except against other mounted men, cavalry charges were now mere folly and infantry assaults most difficult; usually no determination or courage could make them other than bloody failures. The only effective way to fight was in skirmish lines firing at will. In the zone of fire, close formations were hopelessly vulnerable and volleys by command ineffective. As time went on, in order to live at all in the presence of the enemy, both Federals and Confederates formed the habit of digging themselves in—as early as the American Revolution European officers had noted the speed with which Americans threw up formidable field works. On both sides the Civil War trenches were tremendous affairs, sometimes supplemented by wire entanglements.

Even without wire, the rifle and the universal habit of entrenchment revolutionized battlefields. Colonel Lyman of Meade's Staff wrote: "I had taken part in two great battles, and heard the bullets whistle both days, and yet I had scarcely seen a Rebel save killed, wounded or prisoner! I remember

how even line officers, who were at the battle of Chancellorsville said: 'Why, we never saw any Rebels where we were; only smoke and bushes, and lots of our men tumbling about'; and now I appreciate this most fully. The great art is to conceal men; for the moment they show, *bang, bang*, go a dozen cannon, the artillerists only too pleased to get a fair mark. Your typical 'great white plain,' with long lines advancing and manoeuvring, led on by generals in cocked hats, and by bands of music, exists not for us. Here it is, as I said: 'Left face—prime—forward!'—and then *wrang wr-rang*, for three or four hours, or for all day, and the poor bleeding wounded streaming to the rear. That is a great battle in America."

John Codman Ropes wrote of Grant's 1864 campaign ". . . its terribly bloody battles, its encounters of every day . . . the noble trees cut down by musket balls . . . the thousands upon thousands of brave men slain and maimed, and, above all, the indecisive results, amaze, terrify, repel, dishearten us. . . . The experience of the Army of the Potomac in the campaign was in fact a new experience for soldiers. Sacrifices were demanded every day of the rank and file of the army which had hitherto been required only occasionally, and then only from those selected for some special post of honor or danger. . . . To lie in a new-dug rifle-pit a hundred yards from the enemy for several days under constant fire is much like the experience of the engineer troops in a siege. To rush from the rifle-pit upon the enemy's works is the act of a forlorn hope, whose gallant performance is the admiration of a storming column, itself selected for a special and dangerous service. But it is not every day that the sap is pushed forward or the breach assaulted."

Indeed the habit of entrenchment made most of the later Civil War battles like siege warfare. The attacking side had to have a superiority of about three to one. Stonewall Jackson used to say: "We sometimes fail to drive the enemy from his positions, but he never drives us from ours." Naturally enough, few commanders on either side could adapt themselves to new tactics so different from those in which they had been trained. Both Grant and Lee ran up fearful butcher's bills, which Lee could afford far less than Grant. Sherman, as we

have seen, was an exception. Also Thomas' victory at Nashville was a fine example of a siege or trench battle. Both armies were entrenched, and Thomas, constantly extending his right flank throughout two days' fighting in order to envelop the Confederate left, finally so stretched the hostile line that he was able to pierce it near the center, destroying the Confederate army.

Plenty of Civil War officers had read Jomini, and whether they had read him or not they were well grounded in military rudiments so that they understood the importance of manoeuvre. They had however no choice: men in close order for manoeuvres of the old sort simply could not live under fire.

The tactical strength of the defensive made strategy slower. The prolonged firing at considerable ranges consumed ammunition enormously. At Bull Run an estimate of one casualty to every eight or ten thousand bullets fired was thought conservative. At Gettysburg Pickett's charging troops had enough projectiles fired at them to have buried each one under a ton of metal. At such a rate the men and their army wagons could not carry ammunition enough for prolonged fighting far from a base. At the same time the social conditions of the struggle forbade living off the country in the savage Revolutionary-Napoleonic fashion. Sherman's march to the Sea was the one example of systematic devastation on a large scale. When operating in friendly Virginia, Lee often found himself compelled to move merely in order to feed his army. Accordingly victorious armies, instead of sweeping along for great distances in the Napoleonic manner, were compelled to pause while organizing transport and communications for a forward bound of limited length.

Slow strategy in turn made for a prolonged war, decided in great part by economic factors, blockade, etc. This again is like siege warfare in which decisions are usually achieved not by arms alone but by arms in alliance with famine.

As the American Civil War resembled the Revolutionary-Napoleonic struggles in its mass armies and fierce popular passions, so it resembled that contest in the impossibility of a settlement by compromise. As in 1814 and '15, so in '65; only the total overthrow of the defeated party ended the fighting.

The ensuing peace also followed the pattern of democratic war. Far from reminding us of the kindly and moderate settlement imposed upon France by the reactionaries of 1815, it was even harsher than the uneasy truces which followed the temporary successes of the Revolutionary-Napoleonic French. Unlike those truces, the settlement has endured, but nevertheless the scars of "Reconstruction" have only recently healed. Bitterness still remains, and to this day the South is a comparatively impoverished section, much of which still votes for the Democratic party because Southern whites still identify the Republican party with negro domination.

The heavy cost of the war in blood and treasure cannot be fully known. Out of its population of twenty two millions the North lost a hundred and ten thousand killed in battle or dead of wounds, and about a quarter of a million dead of accident or disease. How many of those discharged as unfit for further service afterwards died as a result of wounds or disease suffered while in service, we do not know. The Confederate figures—ninety four thousand killed or died of wounds, sixty thousand dead of accident or disease—are still more imperfect; on an average they cover only about two years out of the four years of the war. Like the Northern figures, the Confederate lists do not give the number who died after discharge from injuries or disease contracted during the service. Neither side recorded the permanently crippled. A total estimate of a million permanent losses for both together is perhaps not far out of the way. In terms of money, the North alone raised two thirds of a billion in taxes, borrowed over two and a half billions, and issued nearly half a billion "greenbacks" of unbacked paper money which long remained to curse national economy and politics.

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In studying the American Civil War the reader will have been forcibly reminded of 1914-'18. The significance of 1861-'65, however, was ignored in Europe. Its technical lessons were long obscured by two continental European wars which almost immediately followed, in both of which Prussia achieved a decision with more than Napoleonic speed.

* * * *

The foundation of these Prussian successes was laid in the army reforms of 1860, inspired and carried forward by William, first as Prince-Regent, then as King. A keen and studious soldier all his life, at seventeen he had been decorated for gallantry in action during the campaign of 1814. He chose as his instrument Von Roon, the youngest Lieutenant-General in the Prussian army, whom he made Minister of War.

The problem was to improve the existing Prussian mass army based upon universal service—apparently no one considered a professional or semi-professional, long-service force such as the French had had since 1815. On the other hand the existing dual system with its minority of regulars and its majority of "landwehr," i. e. militia, was clearly not worth continuing. The weakness lay in the landwehr battalions and in the landwehr officers. At the same time the increase in the Prussian population from eleven millions in 1820 to eighteen millions, together with the corresponding increase in wealth, made it possible to spend more money.

Von Roon's solution was to train the entire annual "class" in the regular army, thus raising the active regulars from one hundred and thirty thousand to two hundred and ten thousand, and nearly doubling the number of infantry battalions; to increase the term of service in the regular army reserve from two to four years; and to make of the first five classes of the landwehr (that is the men from twenty seven to thirty two who had previously been called the first "ban" or first draft) a supplemental regular army reserve. This necessitated a large increase in the number of regular officers. At the same time the rearmament of the forces—of which more in a moment—was actively pushed.

The whole scheme called for a huge increase in taxes which were raised twenty five per cent. Such a burden was satirized by the French artist Daumier in a cartoon called "The Prussian Hercules. Will he achieve it?" Before an audience representing the concert of Europe, the Prussian is shown lying on his stomach, nearly naked but wearing a spiked helmet. On his back is a wooden frame which supports a mass of heavy metal weights. One is not certain whether his ordeal is to crawl for-

ward to some goal, or merely to resist being pressed to death by the weight bearing down upon him.

The Prussian liberals, seeing in the new scheme a reduction of the democratic character of the army, raged against it. To them the watering down of the regular battalions, which at war strength would henceforward include a majority of reservists, was as nothing compared with the absorption of the old landwehr battalions by the regulars. Their rage, together with the groans of the taxpayers, made the new program unpopular, but Prince William, who shortly became King, went steadily on.

When first named Regent, one of the new Monarch's first acts had been to make Von Moltke Chief of Staff—a post in theory subordinate only to the King and in practice equivalent to that of Commander-in-Chief.

The name of Helmuth Karl Bernhard Count Von Moltke still stands highest among soldiers since Napoleon. As a philosopher of war and military theorist Clausewitz was greater; here Moltke wisely followed him. As organizer, tactician, strategist, executive fighting soldier and leader of men, claims might be made for other American and European commanders. Certainly others have surmounted difficulties greater than those with which Moltke had to deal. He remains unique in that he was great in all fields of soldiership, most of all in that he systematically adapted military methods to the new conditions born of the industrial revolution. Much of this adaptation had been brilliantly improvised by different American Civil War leaders, but he was able to plan methodically and with some leisure. Also he was happy in his opponents and well served by fortune, so that his merits clearly appeared.

Moltke's central idea was the decentralization of command. Allowing generously for the enormous difference between war and business, we may say that he saw himself as the head of a big military corporation or trust whose branch managers must be allowed to make most of their own decisions. In other words the Commander-in-Chief of an army of more than a certain size must not try to direct his chief subordinates in detail. Instead of issuing orders he must be content with "directives," merely outlining a general plan to be executed. This may indeed result in incoherence, but when handling

large numbers that risk must be set against the impossibility of the Commander-in-Chief doing everything for himself.

This impossibility of personal command over huge forces had always existed. It had contributed to the failures of the vast hordes of ancient times. Eighteenth Century soldiers had held great numbers to be worse than useless. As we saw in the second chapter, so fine a practical soldier as Marshal Saxe had written in a famous passage that with an army of a little less than fifty thousand men a good general can successfully oppose a hundred thousand, "... for multitudes . . . only perplex and embarrass" their own commander. The Revolutionary French when faced with the problem of numbers had invented the divisional system, treating each division as a self-contained unit. At the same time Carnot from his office in Paris had tried—without conspicuous success—to direct the different French armies in the field. Napoleon himself, the supreme example of personal command, had organized his armies into Corps each containing several divisions. However the great Corsican, although excellent when at the head of sixty thousand men or less, and although usually successful with commands numbering up to two hundred thousand, failed badly both in 1812 and in 1813—the two occasions in which he commanded well over two hundred thousand. Incidentally, Grant was at his best in coordinating the action of a large army. In '65 a brilliant Federal Corps Commander, Warren, was relieved because he insisted on binding his Division Commanders by detailed orders as if they had been Brigadiers.

Moltke's system of training sought to make coherent the decentralized command of great numbers. As Napoleon had invented the Army Corps composed of two or more divisions, so he invented the Field Army composed of two or more Corps. So that commanders of large units, guided only by general directives, might cooperate more effectively, he spread throughout the entire Prussian service a common doctrine of war by means of constant manoeuvres and map exercises. To the same end he familiarized the best of his junior officers with the direction of large units by selecting them for General Staff duty, putting them through a regular course of march and com-

bat problems. Thus more than any other one man he was the father of modern Staff method.

So that the new Prussian army could strike quickly after a declaration of war, great attention was paid to rapid mobilization and transportation. To mobilize a unit is simply to prepare it to move from its point of assembly. Here the difficulty is the reservists—an efficient professional force without reservists would need little more than an order to march. The reservist however must first reach the assembly point, then receive his clothing, arms and equipment, be allotted his place in the war strength unit, be medically examined, etc. Meanwhile the unit must receive its necessary field transportation, which meant in the last century chiefly its full complement of saddle and draft horses. Every step of the process is full of difficulties which those who have grappled with them will never forget. Moreover these difficulties increase with the proportion of reservists to be incorporated and with the proportion between the army and the total population. In Prussia over half the enlisted men of an average regular unit at war strength were now reservists, and from a population of about twenty millions it was proposed to mobilize half a million men in the regular army alone exclusive of the landwehr. Except for the necessary covering forces near the frontier, the Prussians decided to mobilize their units fully before beginning to transport them. With a typical attention to detail, they labored mightily to shorten the time which must pass between the issuing of mobilization orders and readiness to take the field, finally shortening it to about nine days. In the same way transportation, especially by rail, was minutely studied. Moltke himself knew much about railways, so that his personal influence in the matter counted heavily. In short, Prussia could now strike faster than any other power.

Meanwhile equipment and especially the supply of new weapons was vigorously pushed. Although mid-Nineteenth Century Prussia had not yet raised applied science and industrialism to the height later reached in Imperial Germany, both were already well developed. As early as 1841, thirteen years before the Crimean War and twenty years before the American Civil War, certain Prussian infantry regiments had been

armed with breech-loading rifles. Since then all the Prussian infantry had been similarly supplied. About two thirds of the Prussian artillery was now equipped with breech-loading rifled pieces accurate up to nearly four thousand yards.

The doctrine of war which Moltke diligently taught from his appointment as Chief of Staff in '57 was based upon Clausewitz, adapting the details of that master's teaching to decentralized command, the new means of communication and the new weapons. With Napoleon before his eyes, Clausewitz had said: seek to understand the nature and conditions of the particular war in which you are engaged. Raise the greatest numbers susceptible of tolerable organization, use them with the utmost vigor and speed. Seek prompt decision by battle, and in battle seek to destroy the hostile army. So far Moltke followed absolutely. He judged, however, that of the two Napoleonic tactical methods, i. e. piercing the hostile center or enveloping one or both hostile flanks in order to cut off retreat, only envelopment was practicable under the new conditions. As he truly saw, properly defended fronts covered by broad belts of rifle fire were now virtually unbreakable. The vulnerable spots were the flanks, and frontal attacks were desirable only to hold the enemy in his positions to prevent his forming front to a threatened flank.

Further—and this was of the highest importance—Moltke interpreted the new conditions as demanding the utmost strategic simplicity. Napoleon at his best, for instance in his campaign of Jena against Prussia herself, had subtly combined the movements of his different Army Corps so as to mislead the enemy, uniting his forces only just in time for battle. Also the Corsican had repeatedly swung his whole army in wide turning movements of the greatest boldness, abandoning his own communications in order if victorious to drive his enemies from theirs. Moltke, although as bold as any soldier who ever lived, proposed to act differently. Meditating Clausewitz' warning against anything at all complicated, fragile, or intellectually ambitious, he would move straight and fast upon his enemy, concentrate in plenty of time before battle, and only then lap around the hostile flank or flanks, enveloping his op-

ponent on the battlefield itself instead of swinging around that opponent before bringing him to action.

The extreme simplicity of Moltke's strategy is significant. In directing the new war of mass armies and boiling popular passions, Napoleon, a child of the Eighteenth Century, had preserved something of the finesse and subtlety of Eighteenth Century generalship. So might a skillful fencer with the foil strive to handle a heavy saber with the art characteristic of the lighter weapon. Moltke on the contrary was like a man with a saber who studies to develop the muscles of his arm and wrist in order to beat down his opponent's guard by the mere weight of his blows. In other words, by using his saber like a club.

This ultra-simple club strategy fits exactly the democratic drift of ideas. We have seen that Prussia, although denying the equality of man at the ballot box, had through her mass army recognized that equality on the battlefield. Her military cult of numbers was on all fours with the democratic preference for quantity over quality. Modern democrats, following their master Rousseau as we have seen, have preferred the masses to the classes precisely because the masses are more simple, more "natural" in the animal sense. In the same way they have preferred the barbarian to the civilized man. Alas, the danger of trying to make complex things simple is that of crudity, which is the vice of the barbarian. Napoleon having failed to handle his vast armies of 1812 and '13, here we have Moltke, master of a far more complex technique, disposing not only of numbers but also of railroads, telegraphs, and complex weapons. Yet we find him compelled by the very complexity of his technical means to operate after a fashion so simple that in comparison with Napoleon it is crude indeed. So much is the mass army the barbaric horde that it drags generalship downward toward the level of mere clubbing. On the military side this was what the Nineteenth Century called progress.

In tactics as in strategy Moltke insisted upon trying to envelop. Not all the older Prussian officers would follow him in this; some clung to frontal assaults in deep, late-Napoleonic formation with large reserves. Nevertheless he made most of

his subordinates see that, since riflemen could use their weapons only when deployed in skirmish line, envelopment was necessary for successful attack.

The date of the Prussian army reforms, 1860, was the year of Lincoln's first election. In '64, while Grant hammered at Lee, the Prussians gave their new army its baptism of fire against little Denmark, winning an easy success which tested their new methods without making the enormous army expenses popular. Two years later, however, Prussia entered upon war against Austria for the leadership of the German states.

On paper the chances favored Austria. The political and diplomatic situation was to her advantage in that Prussia's one ally was Italy, which kingdom still lacked Austrian Venetia and Papal Rome. On the other hand, all the lesser German states were allied with Austria. As to the quality of the two main armies, Europe thought the Austrians superior; their troops had seven years service against the Prussian three. Their army had been hardened by the Italian campaigns of '48 and '59, whereas Prussia had seen no heavy fighting since Waterloo. If the Prussian infantry rifles were breech-loaders, none the less the Austrian artillery projectiles were thought superior, and their rifle had the greater range. It was sighted up to a thousand yards while the Prussian rifle was sighted only up to four hundred. In point of numbers, even after deducting the eighty thousand Austrians sent to Italy, the balance was heavily against Prussia whose goal of an active army of nearly four hundred thousand was still far from being reached. In the German theatre of war three hundred thousand Prussians must oppose about a quarter of a million Austrians and nearly two hundred thousand from the lesser German states, a total of over four hundred and twenty thousand.

On the other hand the position was not as bad as it looked. Of the smaller German armies only the Saxons, some thirty five thousand strong, could join the main Austrian army of the north. The rest were a mere dust. The mobilization of '59—bad enough from the Prussian standpoint—had shown most of their contingents to be almost worthless. Consequently Moltke took the bold decision of opposing to the hundred and

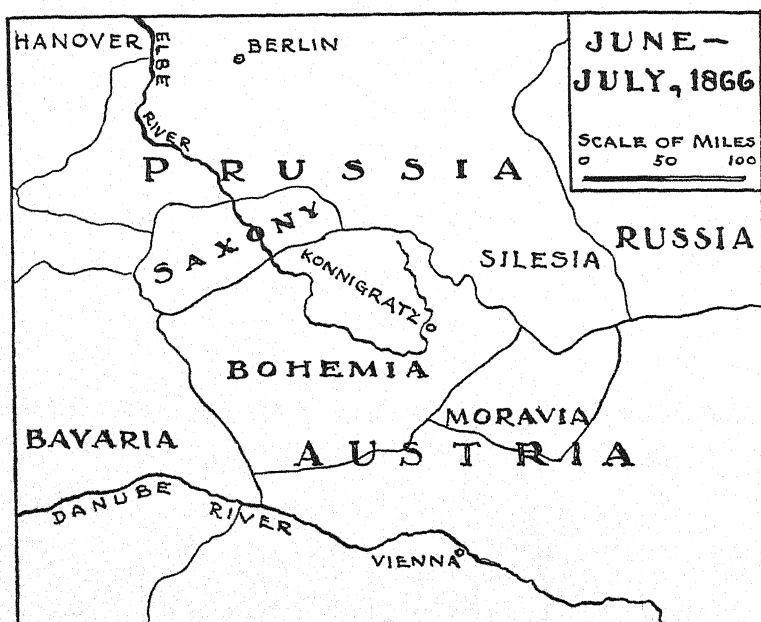
fifty thousand men of the southern and western German allies less than a third of that number. By so doing he affected a great "economy of force" in favor of the main theatre of war in Saxony, Silesia and Bohemia. Here, with well over a quarter of a million men, he could be equal, perhaps even slightly superior, to the combined Austrians and Saxons. Thus he was confident, for he knew the Austrian Command and Staff to be inferior to his own. Also the tactical doctrine of the Austrians was defective. Having suffered so much from the French bayonet in 1859 they now over-emphasized that weapon.

At the outset Prussia's excellent mobilization and transport arrangements gave her a diplomatic advantage. Her ambitious foreign policy had now for some years been guided by the genius of Bismarck, who had said in a famous phrase that Germany would be unified not by speeches but by blood and iron. He now availed himself of Prussia's power to strike quickly, delaying the order for mobilization until after Austria had issued a similar order. Thus Austria seemed the aggressor, yet the Prussian armies were first in the field.

Beginning in June, the war was won by Prussia in only seven weeks. Within a fortnight a vigorous offensive by the small Prussian force in the west had surrounded and compelled the surrender of the Hanoverians, the best of the little German allies. The Hanoverian government had provided so little ammunition for its troops that after some early successes they could not go on. Meanwhile the Prussians in the main theatre facing Saxony, Bohemia and Moravia had been saved from a dangerous position by sluggish Austrian leadership. Their concentration, already extended over a dangerously long front of two hundred and fifty miles because of the shape of their railway net, had been stretched still further to the east for fear of an Austrian invasion of Silesia. Instead the Austrians thought only of defending themselves. Moreover the Prussians won most of the opening engagements. The unskillful Austrian Command engaged their units piecemeal, while the available Prussian units, often far inferior in aggregate numbers, acted together. Moreover the Prussian breech-loading infantry rifles inflicted heavy losses; their in-

ferior range was unimportant compared with the enormous advantage that the men in the skirmish line could reload lying down.

Consequently toward the end of June Moltke was able to draw his scattered units together in northeastern Bohemia. Originally the Prussians had stood in three Field Armies: on the left or eastern flank the Second Army about a hundred thousand strong, in the center the First Army and on the right the Army of the Elbe. The two last were now combined to



form a total of a hundred and seventy thousand. The Austrians, about equal in numbers, were known to be close by near the upper Elbe; in fact they were west of that river. Neither army knew the other's position, for on both sides the cavalry had been held back for use on the battlefield. No one in Europe yet realized that the rifle had made cavalry charges impossible, consequently the mounted men had not been pushed forward to find the enemy. Unable to believe that the Austrians would fight with the river in their rear, Moltke wrongly

imagined them to be not west but east of the Elbe, in a position very strong frontally and on its right or northern flank. He therefore planned to envelop their left, although this meant sending most of his force on a flank march across the Austrian front. All soldiers know such marches to be full of peril, for if attacked you must halt your marching columns and form front to your flank, which is difficult to do in orderly fashion. Meanwhile your enemy is already in order of battle. Given the real position of the Austrians, such a move invited a Prussian disaster.

Lest the non-military reader blame Moltke's error too harshly, he should remember the peculiar difficulties which beset generals, often leading the greatest far astray. The classic instance is Napoleon at Jena: having dealt there with half the Prussian army he believed for several days that he had beaten its main body!

Moltke's order was followed by a game of cross purposes typical of the confusion normal to war. A subsidiary clause in that order left the commander of the First Army, the fiery Prince Frederick Charles, free to attack such Austrian forces as he might find on his left or southeastern flank provided they were not too strong. His patrols discovered a considerable Austrian force estimated at three Army Corps near him and west of the Elbe. Tempted by such a target, he threw Moltke's enveloping plan to the winds and in the evening of July 2 issued orders for a frontal attack at dawn, sending informatory copies to General Headquarters, and also to Second Army Headquarters with the request that that Army cooperate. In reality not three hostile Corps but the whole hostile army of eight Corps, outnumbering Frederick Charles' command by more than eight to five, was in his front. Should the Second Army fail to cooperate, then for the second time the Prussians were inviting disaster.

The officer sent from First to Second Army Headquarters was not told of the importance of his dispatches. Arriving at two in the morning, he found the Second Army Commander, no less a person than the Prussian Crown Prince, inaccessible; he had gone to bed leaving orders that he was not to be disturbed. Also the Second Army Chief of Staff, Von Blumenthal,

who in practice did most of the work of the Army Command, was not yet returned from a visit to G. H. Q. At three in the morning Blumenthal came, read Frederick Charles' dispatch which did not in the least indicate the degree of danger, and without waking the Crown Prince sent a dispatch to First Army Headquarters saying that only one of the Second Army's four Corps would be able to join in the coming fight. Orders for the other three Corps, so he wrote, had already been issued in accordance with the directions of G. H. Q. Meanwhile the other duplicate of Frederick Charles' dispatches had reached G. H. Q. where Moltke saw at once what the true situation might be. It being now too late to check Frederick Charles, he accepted the situation, gave up the plan for enveloping the hostile left, and spurred on the Second Army to the help of the First. The King himself signed an order directing the Crown Prince to support the First Army with his entire command. This order left G. H. Q. at midnight, and reached Von Blumenthal at four in the morning. Within an hour Second Army orders had been altered in accordance with it. Even then, however, Second Army Headquarters did not understand the greatness of the emergency; literal obedience to its directions would hardly have brought most of its units to the battlefield before five in the afternoon.

In the ensuing battle of Koniggratz or Sadowa the Prussians were saved by the hard fighting of the First Army, the passiveness of the Austrians, and the zeal with which the unit commanders of the Second Army marched to the sound of the guns. Until about two in the afternoon the First Army fought against odds of five to three. Moreover its order of battle was so contracted as to throw away what was left of the opportunity for enveloping the Austrian left. None the less the troops went forward stubbornly, rain and mist covered their approach from the strong Austrian artillery, and accidents of ground favored their advance. By eleven all First Army reserves had been exhausted. Had the Austrians used some of their many fresh troops in counter-attack, the tired Prussians must have recoiled. But by two the Second Army, urged by its unit commanders, began to reach the field, rolling up the Austrian right. The Prussian artillery, which in earlier fights

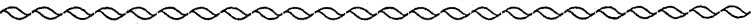
had often failed to get into action at all through marching at the rear of the columns, was now boldly pushed forward to play upon the densely massed Austrian reserves. Towards evening the Austrians retired.

On the whole the Austrian units with their large proportion of veterans were still in hand, whereas the victorious Prussians were jumbled together in the greatest confusion, incapable of pursuit and probably unable to resist a counter-attack had one been made. What decided matters was that the spirit of the Austrian Commander-In-Chief was broken. He thought only of retreat, which was continued toward the Danube east of Vienna, greatly depressing the spirits of the army.

War now sputtered out in negotiations. As in '59, had Austria been a united national state full of patriotic popular passion her government would have been forced to continue the struggle. Considerable reinforcements might have been brought up, especially from Italy where the Austrians had won a battle. Indeed a concentration around Vienna was begun. Or had the Prussians on their side been determined upon a total defeat of their opponent, they could not have done so without further fighting. Napoleon III, although many of his best troops were absent on a military adventure in Mexico, was anxious to take a hand in the game. As we have seen, however, Austria was not national, but was the last representative of the old Medieval christian idea of a monarch ruling over his various peoples and keeping the peace among them, allegiance to him and not nationalist passion being the bond of union between his provinces. On the other hand the situation had changed since '59, in that the beginnings of separatist nationalisms in Austria now weakened her government which could not trust certain of its subject peoples. Nor did the Prussians under Bismarck wish to destroy the ancient German-speaking Hapsburg dynasty. Their object was leadership over the smaller German states. With a wise restraint, autocratic Prussia made peace without annexation of Austrian territory—which she could hardly have done had her populace been full of democratic hatred against her rival. The Austrian government, similarly independent of popular passion, was free to cede Venetia to Italy and to consent to the formation of a

North-German confederacy under Prussia, together with an independent South-German confederacy. At the same time Prussia annexed the northwestern German-speaking states.

In only seven weeks the majestic Hapsburgs, the proudest and most ancient dynasty in Europe, had been defeated. Even the great Napoleon had never won such a lightning triumph against such odds. The new, costly Prussian army became popular overnight, and Moltke's personal prestige increased enormously. Within four years of Sedan, Prussia at the head of the North-Germans and in alliance with the South-Germans was at war with France.



Chapter V

Mass War Culminates

1870-1914

*"Valmy, Saragossa, Tarançon, Moscow, Leipzig, . . .
those glorious examples of the peoples' passions."*

—FOCH. (In admiration for "national" war.)

THE PRUSSIAN MASS ARMY next won a crushing victory over France, first destroying the French long-service regular army even more quickly than it had beaten the Austrians, then defeating the French national resistance. Practically all the civilized world except England and the United States then set up armies on the Prussian model, and thus mass war culminated. On the other hand military theory presently began to go wrong, getting out of touch with reality.

* * * *

After Sadowa Napoleon III, profoundly moved like all France by the threat of a united Germany under aggressive Prussia, tried in vain to strengthen the French army by training reserves. Having served when young as an officer in the Swiss militia army, he understood the value of such reserves, but was defeated by a combination between left wing pacifists, unwarlike middle class rich, and officers contemptuous of all but long service troops. The French parliamentary debates were enlivened by a prophetic phrase: a pacifist fool shouted at the Minister of War "You want to turn France into a barrack," to which the Minister of War, Marshal Niel, answered "If you are not careful you will turn it into a cemetery." Meanwhile in Prussia the new army became popular despite

its cost, Moltke's prestige increased enormously, and preparations were actively pushed. Although there had been some dissatisfaction with the new rifled field guns in 1866, this was rightly put down to unfamiliarity, and all the field artillery was equipped with the new pieces. Napoleon III planned to re-equip the French field artillery in like fashion, but was unable to do so in the time afforded him. His chief constructive move was to issue to his infantry the Chassepot breech-loading rifle, superior in range and flatness of projectory to the Prussian needle gun. A practicable machine-gun, the mitrailleuse, was also introduced, but unfortunately was mounted on a high, artillery carriage, and was considered not as an auxiliary infantry weapon but as light artillery to be used at long ranges. The French field artillery was actually inferior to what it had been in '59. Its projectiles were fitted with time fuses, but four of the setting points of these had been done away with, so that the shells could not be made to burst in the air when firing at ranges between fifteen hundred and three thousand meters.

The French diplomatic preparation for war was bad; the alliance of Austria, Italy and the South-German states was expected but not firmly secured. Indeed the South-Germans, frightened out of their traditional hostility to Prussia by Napoleon III's claim to the left bank of the Rhine, secretly allied themselves to Prussia and the other North-Germans. With a cynicism worthy of Frederick the Great, Bismarck gave out a forged telegram which achieved its object, provoking the French into declaring war.

As between the armies, the French had had far more experience of active service; they had fought in the Crimea, Italy and Mexico, besides colonial campaigns in Indo-China and constant small wars in Algeria, while the Prussians had seen only the short campaign of '66 and the little war against Denmark in '64. On the other hand, the French had no coherent doctrine of war such as Moltke had built for the Prussians on the solid foundation of Clausewitz, nor had their Command and Staff been systematically trained in moving troops and in coöperating with the commanders of neighboring units. In France the skyrocket Revolutionary-Napoleonic promotions of able

officers had made soldiers imagine generalship as the individual improvisation of some genius for war, but the officers of Napoleon III had undergone no such rigorous tests of fitness for command. As to tactics, since the French afterward blamed themselves for standing too much on the defensive, it is interesting to note that their standing orders in force in 1870 were not as defensively minded as those of the Prussians. Both recognized the superior marksmanship of motionless and sheltered defensive infantrymen over infantry assailants, but the French "Observations" of '67 consider the attack normal and merely advised its careful preparation. They assume the decisiveness of the bayonet. On the contrary Moltke's "Instructions" of '69 go so far as to say "if we can occupy such a position that the enemy . . . will decide to attack . . . , it seems perfectly reasonable to utilize the advantages of the defensive at first before assuming the offensive." Like the French regulations of '31, the Prussian service had emphasized skirmishers ever since the regulations of '47.

On such terms the conflict between military quality and quantity, between the French professional soldiers and the Prussian conscript mass, was joined.

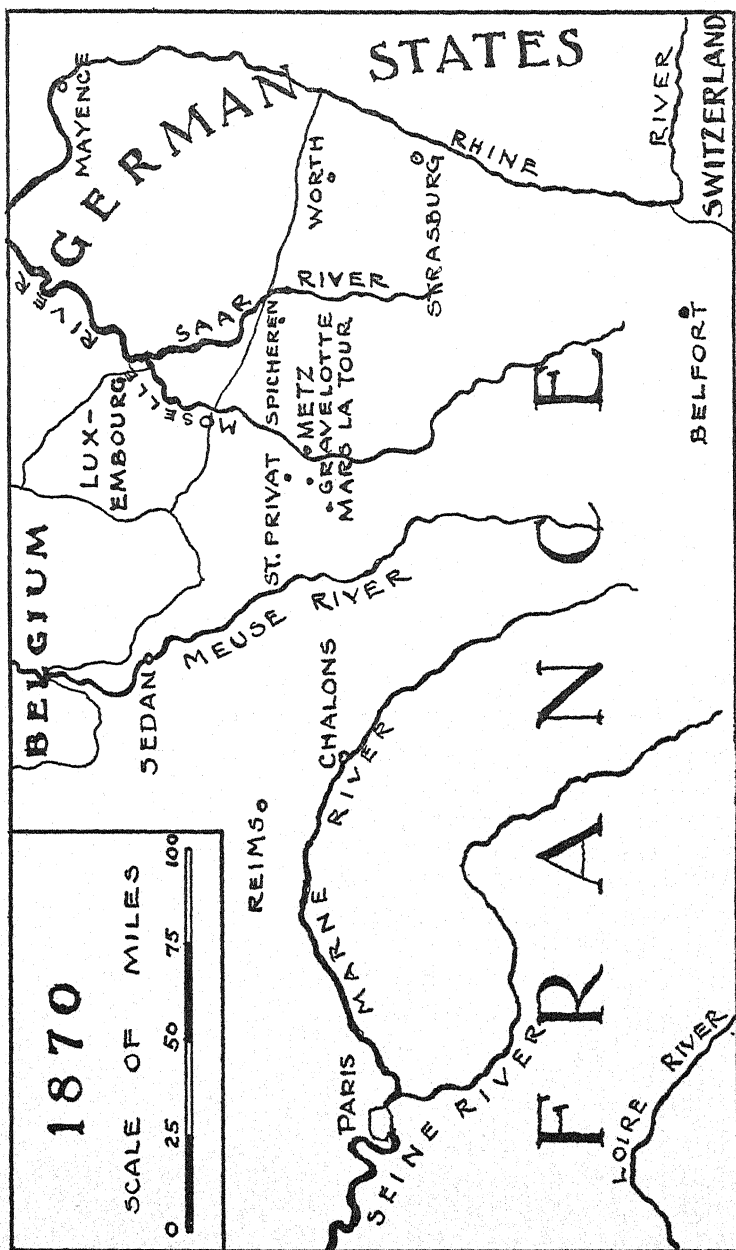
As if to deepen the irony of a universal service army in the service of autocratic Prussia against a professional army at the orders of a democratic Caesar like Napoleon III, the whole French conduct of the war was dictated by public clamor. If democracy be indeed government by public opinion, and if responsiveness to that opinion makes a government democratic, then the French disasters of '70 were a perfect example of democratic interference with strategy. Neither Carnot nor the great Napoleon would have dreamed of such a thing.

It would have been wise to delay hostilities until the re-equipment of the French artillery was complete. Instead, a handful of newspaper owners and a few excited orators in the French parliament were allowed to force Napoleon III into an immediate war. Next "opinion," or at least the vocal minority of opinion, dictated the conduct of operations. Against Prussia two intelligent courses of action were open to the French with their quarter of a million highly trained regulars back of whom stood only untrained reservists. Either the regulars should

have been used at once to upset the Prussian mobilization and concentration, or serious fighting should have been delayed until the reservists had been absorbed into regular formations and had learnt from their professional comrades the rudiments of soldiering. Instead the French regulars, without their reservists, were rushed to the frontier in obedience to the newspapers and the Parisian mob screaming "On to Berlin"—and then held there! Too timid to resist popular pressure for an advance, the government now showed itself afraid to attack boldly.

The Prussian plan was to advance in the direction of Paris, taking for first objective the French armies wherever found, and for second objective the capture of Paris and the driving of the French forces beyond the Loire. Mobilization was ordered on July 15. The French move to the border had at least the merit of persuading Moltke to detrain his masses well back in the neighborhood of Mayence, but presently about four hundred thousand Germans were advancing against less than a quarter of a million French—Monteilhet says two hundred and forty three thousand, one hundred and seventy one. Seventy five thousand more Germans would soon arrive, so that the odds, already eight to five, would soon be more than nine to five.

The French on the frontier stood in two groups: one of five Corps near the Saar, the other of two near the Rhine. Had Moltke's plan for a broad and more or less continuous deployment than followed, one or both French groups might have been surrounded and destroyed. Instead the German Field Army commanders bunched their forces opposite their enemies. None the less the frontier battles went in favor of the Germans, chiefly through the initiative of their unit commanders. Those in front would pounce upon an opportunity to attack, whereat all near the scene would promptly march toward the sound of the guns, while French Corps and Division commanders were slow to move without orders from above. The two eastern French Corps, beaten at Worth, retreated across the rear of their comrades to Chalons, over a hundred and fifty miles from the scene of their defeat. One Corps of the main French group which had—at long last!—timidly begun an



advance across the border in order to impress European opinion, retreated after a confused action at Spicheren against slightly superior numbers. Discouraged at this and at the news from Worth, Napoleon III cancelled his orders for a general advance, and directed a retreat as far as Chalons where the French reservists were assembling. Learning of this, the Cabinet in Paris telegraphed to French Headquarters that an abandonment of the great frontier fortress of Metz would mean a revolution in the Capital. At this the Emperor again changed his mind for the third time, put Marshal Bazaine in command with orders to stand east of Metz, and left the army.

Meanwhile the Germans, temporarily in the greatest confusion after their own victories as in '66, had lost touch with the enemy. Judging the French to be in full retreat, Moltke ordered an advance on a wide front south of Metz, hoping to envelop the enemy by means of the German left or southern wing. On August 14 this brought the extreme German right into contact with the greatly superior French forces still in position east of Metz, but again the situation was saved by the neighboring German unit commanders who rushed into action with such spirit that the fighting was indecisive. The French withdrew into and through Metz.

Again Moltke and the German Command, unable to conceive of the irresolute, drifting policy actually being followed by the French leaders, assumed the French to be in rapid retreat westward. In actual fact the French Staff dismally failed to regulate the movement of their closely packed units over the congested roads around Metz, and in the narrow streets of the town. Thus on the morning of August 16, while the Germans were pushing forward to cut off an imaginary French retreat to the Meuse, the French Field Army had only just cleared the Metz area and stood close to its western forts. Consequently the extreme German right, now the Third Prussian Corps under Von Alvensleben, found itself at Mars-la-Tour, without hope of immediate support and faced by five French Corps.

Fortunately for Prussia, Von Alvensleben was an excellent soldier. With determination and moral courage equal to this desperate emergency, he saw the best chance of concealing his weakness was to attack. All day he did attack regardless of

losses, so impressing the French Command that they made no attempt to crush him as they might easily have done. By evening the Third Corps had been fearfully punished, but German supports were beginning to come up, and the worst of the emergency had passed.

Even on the next day, August 17, a determined French attack should have succeeded. Alternatively, the French might have retreated north-west. On the other hand, their inferior mobility was evident enough. Consequently Bazaine feared to be overtaken and crushed in the open field. Napoleon III had impressed upon him the political importance of Metz. The place also had high military value. Within its forts, even if surrounded, he could long detain considerable numbers of the enemy in his front. Thus he could at least gain time, which if wisely used by the French authorities might save the campaign so disastrously begun. Consequently he gave up the idea of retreating westward or northward. Instead he would retire within the forts of Metz. But before retiring he would stand west of the town, facing westward in a strong position about seven miles long, on a ridge with his left near Gravelotte and his right at St. Privat. Here he might at least inflict heavy loss upon the enemy.

On their side Moltke and the Prussian Command spent a day, August 17, in reorganizing the units so sorely tried at Mars-la-Tour, and in concentrating their First and Second Field Armies preparatory to renewing the action on the 18th. The crisis of the campaign now approached. Should the Prussians, still uncertain of the French position and intentions, swing around and face eastward to attack the Gravelotte-St. Privat ridge where the French were actually posted, then both parties would have given up their communications and would be at the mercy of a victorious opponent. Notwithstanding Bazaine's lack of spirit, the invaders, in hostile country with the Moselle between them and retreat, would be in a most difficult position if checked. None the less, with offensive spirit as high as ever, the Germans again prepared to advance.

In the forenoon of August 18 the actual fighting was again begun on the initiative of a German Corps commander. Once more neighboring German units joined in, and troops once in

action could no longer be controlled by the High Command. Until evening the obstinate action was indecisive. The Germans lost heavily, so heavily that on their right there was a considerable panic and some loss of ground before French counter-attacks. On the German left the Prussian Guard Corps lost no less than thirty per cent of their effectives in an unsuccessful frontal attack upon St. Privat. Incidentally the French Corps which repulsed them fired on this day and at Mars-la-Tour a total of two million rifle cartridges—more than the whole Prussian army had fired in '66. Toward evening, however, a Saxon brigade succeeded in turning St. Privat, from which the French withdrew. In the night the French army retired within the Metz forts as Bazaine had intended to do ever since Mars-la-Tour.

Ignorant of the French retreat and depressed both by their own heavy losses and by the difficulty of their position west of the Moselle, the German High Command spent the night of August 18 in painful anxiety. Some thought the battle lost. At best the result could be called indecisive. Even the great Bismarck openly advised breaking off the offensive. The spirit of Moltke alone was unshaken. Very calmly he said that he was about to give orders for a renewal of the attack in the morning.

To boldness and decision he added promptitude. When the French retreat to Metz was known he instantly made arrangements for surrounding the place and for continuing the general advance westward toward Paris.

Still the campaign was not wholly decided. The French army near Chalons now numbered four Corps, most of the men reservists with little training, but with regular officers and a considerable leaven of regular non-coms and enlisted men. While that army remained in being, if necessary retreating towards Paris, it would serve as a nucleus behind which the national resistance could gather. Should the Prussians advance toward the Capital their difficulties would be considerable. Their line of communications would lengthen, Bazaine in Metz still counted, and Strasbourg together with other French fortresses in the east still held out. Instead Napoleon III, believing that an abandonment of Bazaine would mean the fall

of his government, threw away France's last army in the crowning folly of Sedan.

The elements of the disaster are simple. Over eight German Army Corps, encouraged by repeated successes, were moving westward. Against them four French Corps, dispirited by a succession of defeats, were about to advance. Moreover the lower training of the French and their inferior Staff work made them less mobile than the Germans; against their average day's march of five miles the Germans could average fifteen. Thus the result was practically certain. Bazaine had telegraphed that he would retreat north-westward from Metz. Clutching at this straw, as it was to prove, the army at Chalons, after retreating to Reims, advanced north-eastward. Moltke could not at first credit such stupidity. When convinced, he promptly pushed his weak opponents northward toward the neutral Belgian border. Surrounded near the little fortress of Sedan, on September 1 Napoleon III surrendered eighty two thousand men with five hundred and fifty eight guns. Within seven weeks from the Prussian order for mobilization, and within five weeks from the beginning of serious fighting, the French regular army, except for garrisons besieged in the eastern fortresses, had ceased to exist.

The remainder of the war showed the strength of nationalist passion and the weakness of improvised troops. Now, when all seemed lost, the French made a gigantic effort. The Imperial government fell, the Third Republic was proclaimed by Gambetta, and under the remaining handful of regular officers a force of six hundred thousand men with fourteen hundred guns was raised and equipped. Zeal, however, imperfectly replaced trained troops and experienced officers. On September 19 Paris, a city of two million, defended by four hundred thousand armed men, was invested by only two hundred thousand Germans whose numbers during the siege were never raised to much over two hundred and forty thousand. Although Moltke's confident prediction that before November he would be shooting rabbits on his Prussian estate proved a great error, nevertheless he remained master of the situation.

One chance was still left to the French. The Germans besieging Paris were two hundred miles from their frontier,

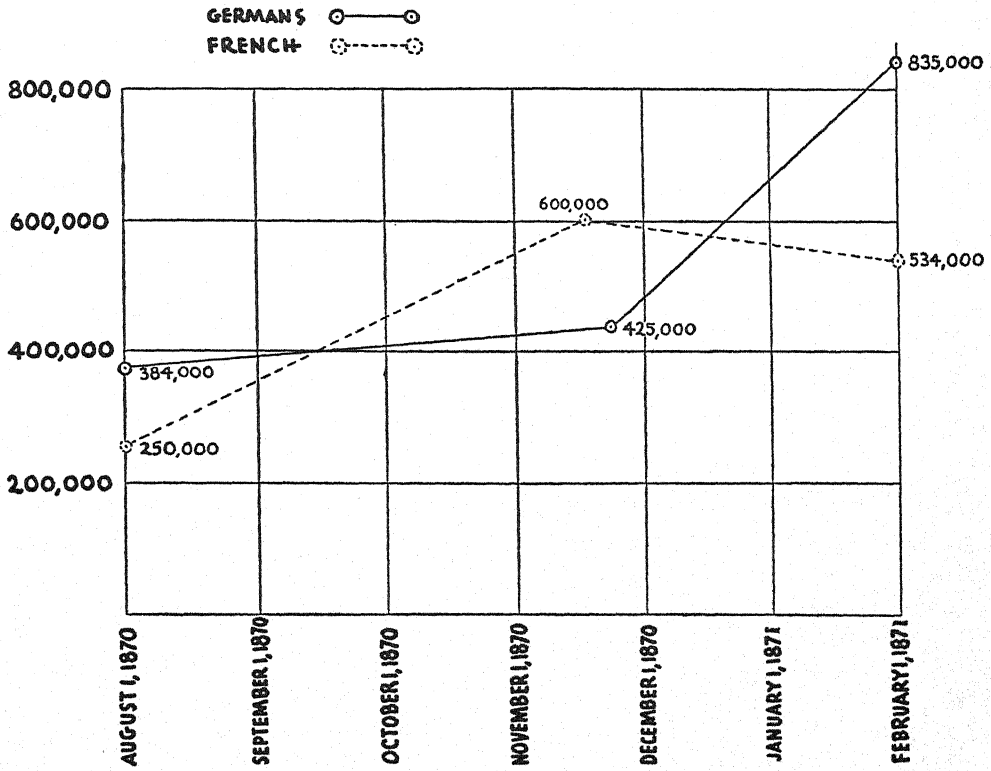
with their communications menaced by constant guerilla warfare from the population. Had the new French forces struck in the east, the invaders must either have lost prestige by raising the siege, or else must have run grave risks in the eastern theatre.

Once again, however, short sighted political calculations dictated French strategy. Gambetta whose energy had done so much in rousing the national spirit and in raising the new levies, was after all only a Revolutionary dependent upon opinion. The obvious strategy which public opinion would best understand and support was to advance directly on Paris, which was accordingly done.

Unfortunately this suited the Germans well, for it permitted them to shuttle their troops between the siege and the repulse of the relieving armies. Worse still, much of the French effort was directed towards Paris from the south-west, over extremely open country where the superior manoeuvring ability of the Germans had free play. Sometimes, when the French could muster three to one, they could win an engagement; only to find their raw levies too shaken by their own victory to follow it up. Usually they were defeated.

Except for Belfort, the eastern fortresses fell one by one. Late in October many of the best German troops were released by the surrender of Metz with a hundred and eighty thousand men. Bazaine, although in the past a gallant soldier, had neither commandeered the provisions in the town nor even fixed prices. Meanwhile the guerilla war had no great success. It annoyed the Germans, infuriating their docile soldiers who could not understand the obstinacy of the French in opposing so unconventional a resistance to the invaders of their country, it provoked savage German reprisals and compelled the detachment of appreciable German numbers to the rear areas, but failed completely to break the German grip on the occupied territory. On the same date, January 29, 1871, Paris surrendered and an armistice was signed, followed in May by a humiliating treaty which surrendered almost all of Alsace and much of Lorraine including Metz, besides an indemnity of a billion dollars.

The Paris mob which had done so much to ruin France in



war continued to disgrace her in peace. After a short occupation the Germans evacuated the capital, paying their bills promptly and in general behaving well. The mob thereupon stripped naked certain women "who had dared to smile upon the Teuton satyrs," sacked a cafe which had been frequented by German officers, and splashed disinfecting fluid about in various public buildings which the Germans had used. A radical government was next set up in Paris which murdered the Arch-Bishop and other prominent citizens, burnt much of the city, and cost the lives of some thirty thousand men, women and children before it was suppressed by French armies from the provinces.

The numbers at the disposal of either side in '70-'71 have been estimated as follows, although the first figure given for the Germans is probably too low. The sixteen Corps engaged, at their war-strength average of thirty thousand each, would have totaled nearly half a million. See chart on page 197.

The curve of French numbers takes into account neither the French surrenders nor the rates at which the new troops were raised. It seeks only to show French strength at three given dates. Monteilhet gives 1,200,000 Germans organized and available.

The Germans lost twenty eight thousand dead, one hundred and one thousand wounded and disabled; the French one hundred and fifty six thousand dead and one hundred and forty three thousand wounded and disabled. Seven hundred and twenty thousand French soldiers either surrendered to the Germans or were interned by the neighboring neutrals.

* * * *

Postponing for a moment the tactical lessons of 1870, let us turn to its influence on army organization.

Nothing succeeds like success. Had the French long-service regulars won in '70, then the world might have returned to armies of high quality. The Prussian victory, following so promptly upon their other victory over the Austrians, persuaded almost every civilized power to organize a mass army on the Prussian pattern. Austria had already done so in '68, France followed suit in '72, distant Japan in '73, Russia in '74, and

Italy in '75. Spain and Belgium continued to modify the system by permitting the payment of substitutes. Outside of these countries every healthy continental European male was legally liable to military training and service by the turn of the century, together with the Japanese, the Asiatic subjects of Russia and Turkey, and the great majority of South Americans. In Prussianized Germany itself enthusiasm for the service ran so high that until 1914 conscripts wept when medically rejected, knowing that through life their healthier contemporaries would have the pick of brides and jobs.

The burden of conscription varied enormously with the resources and military responsibilities of the various countries. Nowhere were all eligible men trained. In countries like Switzerland, Holland and Sweden the service was so short that the armies were mere militias. In Japan only about a fifth of each conscript class was called up, in Spain and still more in South America so small a proportion that the idea of universal service was more a principle than a fact. Even in Germany—where in 1871 the South Germans joined the North Germans in a new Empire under the Prussian House of Hohenzollern—only about half of each annual "class" was trained. France, where universal service was voted in a spirit of patriotic self sacrifice regardless of party, came nearest to making the ideal a reality. There, to anticipate events, at the height of the armed strain leading up to 1914, over four-fifths of each class actually served.

One reason for the different policies pursued by the two chief military powers was social: in Germany class hatred, vigorously exploited by the Jew Mordecai-Marx with his socialist-communist doctrine, was sapping the loyalty of many industrial laborers. Consequently the Imperial government preferred to keep this partially disaffected class out of its army, contenting itself with peasant and middle class recruits.

The principle of universal service, even though many countries realized it only imperfectly in practice, was nevertheless of enormous effect. More men were trained in arms than ever before, while the untrained but healthy men knew themselves to be subject to call in an emergency. Meanwhile population everywhere rose rapidly while total wealth rose still faster.

When fully mobilized, a conscript country puts into the field no less than ten per cent of its entire population. All told therefore, no such armed hordes had been seen on earth as were now being prepared.

Two great powers, England and the United States, remained outside the system, neither having a military problem serious enough to require a mass army. For England the British navy remained a sure shield. The United States had weak neighbors, and could be invaded from Europe or Asia only across prohibitively vast expanses of ocean. Consequently both countries contented themselves with small volunteer armies backed by inconsiderable volunteer militias for home defense, and in the case of England by volunteer native forces for policing and local defense in the scattered provinces of her Empire overseas. The United States was not so far removed from the idea of the armed horde as England. In the American Revolution the militia laws had at least recognized the principle of universal compulsory service, while the American Civil War, as we have seen, had been fought between mass armies.

The reasons for such military efforts as the new European conscription laws were not far to see. The triumph of the Prussian policy of blood and iron put everyone on guard. Whatever vaguely moral arguments might be advanced for the annexation of Alsace, that of Metz and French-speaking Lorraine could be justified only by naked force. In so nationalist an age this was a serious matter, and everywhere nationalist feeling continued to rise. The Germans themselves, far from bearing their honors modestly, became aggressive.

The intellectual influence of Darwin helped to swell the rising tide of mutual hostility. According to him all existing animal species including man had been developed or, as he put it, "evolved" by "natural selection" and "the survival of the fittest" in the struggle for life. Moreover this evolution had been in general from "lower" to "higher" forms culminating in man. We need not here discuss the intellectual weaknesses of Darwinism. Natural selection is today so discredited that hardly any clear minds still take it seriously; to make death the origin of new forms of life is like saying that the lawnmower can originate new forms of grass. Nor can a slight

favorable variation occurring in a few individuals of a species perpetuate itself; in each generation it will rapidly diminish as its few possessors mate with the many who do not possess it. For the moment, however, Darwin became the rage, and his doctrine could easily be twisted so as to justify any successful brutality or fraud. Even those who regretted such things were tempted to say sadly: "survival of the fittest." Indeed after Sadowa a member of the Austrian parliament, full of the hearty contempt of a civilized man for those he considered Prussian barbarians, actually did say: "the question before us is whether Darwin is right." If indeed the great thing about nature is that she is red in tooth and claw, and if man descends from apes and is only a part of animal nature, then he had best bite his neighbor quickly before being bitten himself.

Much of Clausewitz' teaching chimed in with this sort of thing, for instance his saying "War is much like business competition pushed to its . . . logical consequences and unrestrained by . . . any law other than . . . expediency." This, as Colonel (later General) Maude observed, is merely the Darwinian formula of the struggle for existence transferred to the national plane.

In this ultra National and Darwinian age, for what sort of war were the vast and constantly increasing hordes being trained? Until 1914 the answer had to be given almost wholly in terms of military theory based upon very few relevant facts. Before the French Revolution the modern world had seen no mass armies. Since the general introduction of the infantry rifle there had been only three short European campaigns: that of 1859 between the Austrians and the French, that of '66 between Austrians and Prussians, and that of '70-'71 between Prussians and French. Ruling out the unhappy, raw, French levies raised after the destruction of the French Regulars in '70, the aggregate length of the campaigns fought by armies of riflemen representing great European powers had been only four months. Again, for forty three years after 1871 no first rate European armies clashed. During that time the two greatest wars were both fought by Russia: first against the Turks in '77, then against the Japanese in

1904. The Turk, although an obstinate fighter, was not in a class with the chief European military machines, and Manchurian conditions differed greatly from those of Europe.

Through the long peace of 1871-1914 with its continual armed strain, military theorists concentrated upon the Austro-Prussian and Franco-Prussian Wars. The American Civil War they neglected. Europeans despised a new, and, as they thought, raw continent. The great Moltke himself was reported to have called the American Civil War: "two armed mobs chasing each other around the country, from which nothing could be learned." Even later, when British soldiers about the turn of the Century began at last to study the operations of '61-'65, they neglected their later phase of chronic entrenchment. When military students during the long peace turned for the moment from '66 and '70, their eyes rested not upon the grinding American struggle but upon the spectacular triumphs of Napoleon. Hypnotized by his romantic glamor, they forgot both his final defeat and that most of his victories had been won over enemies who had not yet learned his game. Careless of the great and increasing difference between their armament and his, not only the French but the German Staff continued to idolize him.

The essence of post-Moltkean neo-Napoleonic military theory lay in two closely connected ideas: an exaggerated cult of the offensive and a belief in a short war—both based upon a tactical misconception.

At the risk of wearying the reader, let me repeat once more the elements of the contrast between offensive and defensive war. In general the defensive is the stronger form because the defender can await attack in good order and on chosen ground which he can fortify, whereas the assailant must move forward and expose himself while doing so. On the other hand a pure defense can seldom achieve a positive object. At best it can gain time and inflict heavier losses than it suffers. Thus only he who is able to adopt the weaker, offensive form of war can ordinarily hope for positive results. By successful attack which drives our enemy from his positions we compel him to submit to our will, far more than we could by merely holding

our own positions; but we must be either materially or morally superior to that enemy in order to make such an attack.

In 1866 and '70 the Prussians—full of Clausewitz' praise of energy, resolution, and the spirit of sacrifice—by offensive action had beaten unduly passive opponents. These wars therefore seemed to teach the unwisdom of a defensive attitude.

For the moment the French were not hypnotized by the offensive. They had learned all too well to respect their eastern neighbors. Since their new universal service law would take a long time to produce its full result, for years they would remain far inferior in number of trained reserves. They spent enormous sums, equal to about three years of their entire national revenue, in building fortresses near their new German frontiers. Their first new Regulations since their defeats, issued in '75, stressed the importance of fire. As an official French document of that year justly observed: "Troops... in close order can no longer manoeuvre, fight, or even remain in position under fire." Accordingly the only possible formation for combat is the skirmish line. The normal interval between skirmishers was fixed at no less than six paces.

The Germans on the contrary were slower to learn the lesson of fire power. Under actual fire their troops had been quick to shun close formations, and after '66 one of their writers had said that future infantry ought to fight "like... savages," that is in loose swarms. Nevertheless after '70 their authorities led by Emperor William did their best to encourage close formations for the sake of better control. Moreover as early as '72 a well known German tactical writer, Major Von Scherff, showed exaggerated offensive ideas. He wrote: "You can never be too strong when attacking"—which sounds like an approval of massed formations for the defenders to slaughter. And again: "an attack made with only part of your force at once suggests the possibility of failure." As a warning against half measures this is well enough, but in itself it so distorts Clausewitz that, in the words of General Fuller, Von Scherff "...initiated... the bull-ring system of attack, head down and straight forward at anything—picador, matador or post-rail."

From this one would think that 1870 had been a year of successful frontal attacks. And yet not one such attack had been

delivered! On the contrary, the American Civil War principle had been reaffirmed. As Moltke himself had foreseen, fronts defended by riflemen had again proved unbreakable. Every successful German offensive had acted by enveloping a flank. In such envelopments the greater range of rifles and rifled cannon had indeed strengthened the offensive by permitting greater convergence of fire upon the flank to be enveloped; the longer the effective range of weapons the longer is the arc from which this converging fire can be concentrated. But frontal attacks had proved useful only in "holding" the defenders to their positions, that is in keeping them so occupied that they were unable to change front in order to meet the decisive, enveloping attack. No European soldier seems to have asked himself: What would have happened had the strength of the new defensive been enhanced by systematic entrenchment as in the American Civil War? Or if the Hapsburgs in '66 and Napoleon III in '70 had headed politically solid states? In both cases the rapid decision had been more political than military.

Meanwhile, if the French after '70 had been quicker than the Germans to learn their lesson as to infantry formations, they had not equalled the Germans in appreciating the new importance of artillery. 1866 had indeed taught the Prussians to mass their batteries and use them from the outset of an action. From the first engagements in 1870 the Prussian guns had done much to decide the infantry combats. At Sedan the French efforts to break out had been halted almost entirely by gun fire. Indeed most of them had been checked outside effective rifle range at nearly two thousand yards from the Prussian defensive positions. And yet the French infantry Regulations of '75 do not even mention artillery; they assume that the guns will have finished their task when the infantry begins to advance.

As to cavalry, neither French nor Germans realized that the rifle had banished it from the battlefield. All but one of the cavalry charges of '70 had been mere massacres of horsemen. The one exception, Bredow's brigade on the day of Mars-la-Tour, although made against infantry short of ammunition, had none the less lost a third of its strength, some regiments

losing a half, and had accomplished little. Henceforward the rôle of cavalry was reduced to reconnaissance and dismounted action. Wonderful to relate, every army in Europe went on dreaming of hurricanes of charging horsemen.

Still another demonstration of the defensive strength of entrenched riflemen was given in the Russo-Turkish War of '77, of which the chief episode was the long defense of the Turkish entrenched camp of Plevna against greatly superior numbers. After some preliminary fighting, on July 30 the garrison, now twenty thousand and lightly entrenched, repulsed thirty thousand Russians, losing two thousand men but inflicting over seven thousand casualties on the assailants. The Turks now dug themselves in strongly. Early in September thirty thousand of them repelled no less than seventy four thousand Russians at a cost of five thousand casualties to themselves and of eighteen thousand to the Russians. After each success the Turks further strengthened their entrenchments. The Russians made no more attacks, but dug themselves in so that two lines of entrenchments faced each other as in the American Civil War. Not until December did the garrison—their communications cut and themselves short of supplies—finally surrender.

The lesson of Plevna went begging like that of the inviolability of fronts in '70. True, the Russian guns were old, and both artilleries badly served. Further, the infantrymen on both sides were shockingly bad shots; an able British war correspondent, Archibald Forbes who was an eye witness, estimated that the Turkish infantry fired sixty thousand rounds to every Russian casualty. On their side the Russians had attacked stupidly in dense masses. Their infantry, trusting to the bayonet, had hardly fired at all. Nevertheless the power of the modern defensive had once more been conspicuously shown.

Astonishingly enough, after 1877 Prussian military writers emphasized the offensive more and more. Meckel said "the resolve to act on the defensive is the first step to irresolution"—as if no resolute commander had ever stood on the defensive! In '83 in his celebrated book "The Nation In Arms" Von der Goltz wrote: "the idea of the greater strength of the defense

is, in spite of all, a mere delusion," adding in the words of Frederick the Great: "to make war is always to attack." Clausewitz would have rubbed his eyes at such a saying.

More astonishing still, as time went on the French too began to see nothing in war except attacking. In general this was connected with a gradual reawakening of national self confidence—and so far it was admirable. Unfortunately however the military theory in which this new spirit expressed itself was deplorable. In part this deplorable theory arose from admiration of the Germans. Clausewitz himself, although a French translation of his great work on war had appeared about the middle of the Century, had little influence upon French military thought until after 1870. Like the Germans, his French followers then took from him chiefly his praise of numbers, energy and sacrifices. In part the new French offensive school had a native source in the writings of Colonel Ardant du Picq, a studious and reflective soldier who had been killed in '70. Du Picq's book, "*Études Sur Le Combat*," published long after his death, was of a mixed sort. He centered his thought on the physical and moral effect of weapons upon the fighting man, sensibly concluding that volleys fired at command were useless, and only skirmishers firing at will were effective. Modern war, as he clearly saw, is not more but less deadly than ancient fighting, through the improvement of weapons. As he put it: arm two men with knives and tell them to get a decision. They will do so quickly and bloodily. Arm them with high power rifles and both will take cover and fire at each other for a long time at considerable ranges. At last, one will probably make off under cover of darkness.

So far this was excellent, but unhappily at this point du Picq erred gravely. Because true shock action is today almost unknown, one side or the other being practically always on the point of giving way before bayonets are actually crossed, he therefore concluded that the moral effect of an attack must unnerve the defenders. The truth is just the contrary; almost always it is the modern assailant who is unnerved by seeing his comrades fall around him in heaps—if indeed he is not killed himself. This side of du Picq's thought chimed disastrously with the rising French nationalist spirit and also with the recent

German military theorists whose books French soldiers were reading.

Around the turn of the Century the chief French theorist was Foch. This great soldier, whose masterly handling of the Allied campaign of 1918 will long be remembered, was a most indifferent theorist. From his two books, "The Principles of War" and "The Conduct of War," the reader—inevitably wiser than he through the sad experience of 1914-'18—may judge how far he failed to read the future.

Foch begins by discussing the general nature of modern war. "The Conduct of War" opens as follows: "The old systems of war, seeking to spare the armed forces, tried to achieve their objectives by stratagem, threat, negotiation, manoeuvre, partial actions, occupation of hostile territory and the capture of fortified places. Since Napoleon, war is conducted without regard to wastage; it recognizes only one argument: force. Not until the enemy has been crushed in battle and annihilated by pursuit is there any question of parley with him."

"The Principles of War" amplifies this passage. War is molded by the societies which make it. Revolutionary-Napoleonic France, by introducing mass, or—if you prefer—"national" or "absolute" war, defeated the other powers who were waging limited war. In '70 Prussia, although monarchical, proved capable of enforcing universal service and of waging "national" war. Consequently France, having returned to limited wars dynastic in aim and economical in method, was beaten. Both in armies and in states "national" war is the creature of popular passion which must be stimulated to the uttermost. Results can be obtained only by fighting. Thus one must prepare for great sacrifices. He quotes Clausewitz: "Victory is purchased by blood," and like Von der Goltz he quotes Frederick the Great: "To make war is always to attack."

How then is the attack to be made successful? Partly by moral forces. Like the other French officers of his time, Foch had carefully read du Picq. He himself was a devout man, rightly impressed with the enormous power of faith. Against the French generals of '70 who had so often incorrectly thought themselves beaten and had therefore unnecessarily retreated,

he quoted de Maistre: "A battle lost is a battle one thinks one has lost," adding for his own part: "A battle cannot be lost physically."

At this point the reader will have begun to rub his eyes in astonishment. But worse is to follow. Notwithstanding Foch's high estimate of moral forces, he saw of course that war is physical and material as well as moral. And he actually convinced himself that "any improvement of firearms is . . . bound to strengthen the offensive. . . . History shows it, reason explains it." Having stated this astounding proposition, he proceeds to a yet more astounding illustration in proof of it as follows:

"Nothing is easier than to give a mathematical demonstration of that truth:

Suppose you launch 2 battalions against..	1	
You then launch 2,000 men against.....	1,000	
With a rifle fire of 1 shot to a minute, 1,000 defenders will fire.....	1,000	bullets
With the same rifle, 2,000 assailants will fire	2,000	"
	<hr/>	
Balance in favor of the attack.....	1,000	"
With a rifle firing 10 shots a minute, 1,000 defenders will fire within 1 minute.....	10,000	"
With the same rifle, 2,000 assailants will fire	20,000	"
	<hr/>	
Balance	10,000	"

As you see, the material superiority of fire quickly increases in favor of the attack as a result of improved firearms."

Such reasoning is worthy of decadent, late-Medieval scholasticism at its worst. Under a surface appearance of compelling logic it hides a complete disregard of facts. Nothing is said about envelopment; apparently the imaginary engagement is a frontal fight. In order to make the conclusion correct, all sorts of unrealities must be supposed. First one must assume

that a man on the defensive presents as good a target as one on the offensive, which is absurd even without entrenchment. With great indulgence toward Foch's argument, Fuller assumes that the one thousand defenders offer only one eighth as much target as the two thousand assailants. Even on this basis, dividing the assailants' bullets by eight changes their favorable balance of ten thousand into a debit balance of seven thousand five hundred. Moreover the objection as to the size of target might be pressed further because the assailant must move and thereby expose himself, while the defender can usually conceal himself and can often protect himself almost completely, thus offering much less than one eighth of the target afforded by the assailant. Second there is the question of accurate aiming; everyone knows that a man lying quietly and firing at the same target as a man who must move will make more hits than the latter. Third there is the question of ammunition supply. The defenders have their reserve ammunition ready at hand, so that they can go on shooting for a long time; whereas the assailants advancing under fire must content themselves with such cartridges as they can carry forward with them. All told, Foch's pretended demonstration is a very nightmare of logic.

It must not be thought that all Foch's writing is on this level. On the contrary, much of it is excellent. If one is a little surprised at the high proportion of illustrations taken from Napoleonic battles fought with comparatively primitive armament, still that can easily be explained on the ground of national pride. Moreover German soldiers as well as French continued to worship the great Corsican. Again, if one wonders at Foch's romantic admiration for popular passions, if twenty years after 1918 one shivers a little to hear him call Valmy, Saragossa, Tarançon, Moscow, and Leipzig "glorious examples of the people's passions," why after all soldiers are not necessarily either detached philosophers or military sociologists. They are military technicians with a sworn duty to their own country and a professional concern with means rather than with ends. If their country is threatened with a certain form of war they must meet that menace as best they can.

What is serious is when soldiers do not understand their

own business, as Foch together with so many others of the generation preceding 1914 did not understand it. If indeed the weapons of his day, far from favoring the offensive, really favored the defensive, and if this physical superiority far outweighed any reasonable moral superiority on the side of the attack, then his whole doctrine of war was hollow.

Nevertheless Foch, for all his exaggerated cult of the offensive, did not altogether lack caution, nor was his teaching identical with the intentions of the French Higher Command, in say 1900. Half of the "Principles of War" is concerned with strategic protection against surprise. This is of course done by means of detached bodies, especially the advance guard. He harshly criticizes the Germans of '66 and '70 for acting on supposition as to the enemy's movements, contrasting this with Napoleon's practice of holding that enemy by attacking him with a strong advance guard. On this point he and the French Higher Command were at one. The French Staff intended to dispose their whole army in a gigantic square with one corner toward the enemy, so that the troops constituting this corner would act as an advance guard on an enormous scale. The troops in the rear corner would be used as reserves to be thrown in late in the action. The idea was an enlargement of Napoleon's description of his march formation on the way to Jena as a "battalion square," by which the Emperor had meant that his Army Corps were disposed so as to enable his entire force to form front in any direction without undue delay. On a great scale the strategic square of 1900 with its large reserves was meant to be a cautious disposition. Belloc puts its underlying conception thus: "I have a better chance of winning if I am always... considering how I should act if... inferior in numbers, in material, and even in moral at any phase in the struggle, especially at its origins but... also towards its close."

Unfortunately the scheme ignored the unbreakable nature of fronts held by modern weapons. At one time it was actually proposed to deploy the entire French army not in a square but in an enormously deep lozenge only about twenty five miles wide—which would have brought so cumbrous a mass to overwhelming disaster. Underlying the belief in mass strategy was

the idea that fronts were not unbreakable, that if you jammed enough men and guns into a given area you could pierce a hostile line. In this matter the Germans, as we shall see when examining their linear strategy, were wiser.

Here Foch, greatly to his credit, disagreed with his own Higher Command. Unlike the Germans he believed in holding up large reserves, but unlike his own superiors he saw that those reserves could not be expected to break a front. If he did not fully work out the consequences of this truth, nevertheless the following passage from "The Principles of War" shows that he saw it:

"Fire has become the decisive argument. The most ardent . . . troops . . . whenever their partial offensive has not been prepared by effective fire . . . will be thrown back on their starting point with severe losses." By partial offensive he means the holding attack upon a hostile front. The decisive attack, as he correctly saw, must be against the hostile flank. A few pages after the passage just quoted he writes: "Moral superiority, resulting from numbers, formations, etc., is no longer sufficient to-day with modern weapons: their effects are too demoralizing.

"We must also develop material superiority, employing to good purpose the many guns and rifles provided by a mass; this requires space.

"Hence the preference, in modern tactics, for flank attacks which permit one to develop the desired superiority of fire against a chosen point; firing on the hostile flank and rear with undeniable moral effect; allowing by an unlimited space the possibility of always manoeuvring the mass.

"Hence the abandonment of the central attack so often practiced by the Emperor. He who employs it now is enveloped by enemy fire and cannot use all of his own fire."

Beside recognizing the effect of fire—even though he sometimes interpreted that effect so strangely—Foch was not altogether blind to the value of entrenchment. In "The Conduct of War" he quotes Von der Goltz: "In every way there is a considerable tendency toward carrying the methods of siege warfare into mobile warfare. Although formerly siege warfare was considered a thing apart . . . everywhere today studies of how to increase the use of temporary fortification when cam-

paigning in the open field are being made. The use of the spade is often advised even for troops on the offensive." To deal with strong entrenchments, as Foch noted, the Germans were supplementing their light field pieces with heavier ones, including a considerable proportion of howitzers using high-angle fire. Here as in the matter of fire-effect his conclusions ironically mingle truth and error. He expected to see future armies divided into two sorts: first armies intended for preparatory, frontal attacks, containing as few men as possible but strong in artillery and making much use of field fortification; second armies of manoeuvre, intended to deliver decisive, flank attacks and therefore as numerous as possible.

Meanwhile the French Higher Command was most unwisely thinking less and less of the proved and deadly effect of fire and more and more of movement without considering how movement under fire could be made physically possible. In 1884 the excellent Regulations of 1875 which had stressed the effectiveness of rifle fire, were re-written. The new emphasis is all too clear. In the new Regulations the normal interval between skirmishers was reduced from six to three paces. This was well enough, but as the attack went forward the supporting troops were supposed to thicken the firing line until the final charge was made in close order two ranks deep! The unreality of this is evident. In practice such a formation would merely be shot to pieces at least ninety nine times out of a hundred. Also, in a most peculiar attempt at military antiquarianism, the firing line was actually supposed to fire volleys by sections at command. In the teeth of their own admired Ardant du Picq, the leaders of so soldierly a nation as the French, seemed not to have realized that volleys had long been as dead as the Dodo.

The French Regulations of '95 were even worse. In them we read:

"When the battalion has arrived within 400 metres of the enemy, bayonets are fixed, and individual fire (without magazines) of the greatest intensity delivered. The available portions of the reserve are advanced. . . . The battalion in second line in the meantime gradually advances closer. The advance is made by successive rushes followed by rapid fire

of short duration. The fighting line reinforced by the reserves, and if necessary by the battalion in second line, gradually arrives at 150 or 200 metres from the enemy. At this distance magazine fire is commenced, and all available reserves, and if necessary the second line, close up the assault. At a signal from the Colonel the drums beat, and bugles sound the advance, and the entire line charges forward with cries of 'en avant, à la baïonnette.' ”

As Fuller justly observes:

“Reality is now completely lost in the clouds of romance. In these Regulations skirmishers virtually disappear and a return is made to linear warfare. The argument runs as follows: If skirmishers do the fighting, would not it be better to put all the rifles into line from the start? The 1895 Regulations answers ‘Yes’; consequently whole battalions shoulder to shoulder in single rank lines are called ‘skirmishing lines,’ and behind them whole brigades, or divisions, are held back for the decisive attack, and are called ‘troupes de choc’ and ‘masse de manoeuvre.’ ”

As we shall see in a moment, if the German theories of this period were not exempt from unreality, at least their errors of doctrine were far less than those of the French.

The reason why the close formations of '95 were even more unreal than those of '84 is found in the phrase “magazine fire.” Since the middle '80's both the French and German armies had been equipped with magazine rifles, thus further increasing the intensity of fire over that possible with the single-shot breech-loader. Moreover, about the turn of the Century, frontal attacks were made still more difficult by the introduction of smokeless powder. No longer could the defender be temporarily blinded by the smoke of his own discharge.

Besides making a great difference to infantry rifle fire, smokeless powder was also an important factor in the development of a new weapon: the quick firing field gun. All previous field pieces had been rigidly attached to their carriages so that the full shock of the recoil was taken by the trail, of which the outer end is furnished with a sort of spade which was intended to dig itself into the ground and thereby to hold

the piece firmly. Ordinarily however the recoil of each shot would force the gun some distance backward. Consequently time had to be lost in running it up once more into position again and again aiming it at its target. To change the direction of fire to right or left, the trail had to be lifted and the entire piece had to be slewed around by hand. In the 1890's, however, automatic recoil mechanisms were developed which—together with smokeless powder—permitted a much greater rate of fire by getting rid of the necessity for running up and re-aiming the gun. These mechanisms worked like an elastic cushion or gradual brake. Their action was double: first when the gun was fired they allowed the barrel to jump backward, all the time slowing up the rate of this backward jump by gradually absorbing the shock of the recoil. Second, when the shock had been fully absorbed they returned the barrel to its original position by means of springs. On account of this cushioning effect, when once the trail spade had been well dug in, the gun on returning to firing position was still laid on its original target exactly as it had been before firing. With smokeless powder, time need not be lost waiting for the smoke to blow away—which often took even longer than running up and relaying. Further, the barrels were made to traverse or pivot slightly, sometimes as much as eight degrees right or left without the necessity of lifting the trail by hand and turning the entire piece. About the same time projectiles were improved. Time fuses, whose imperfect beginnings we noted on the French side in '70, were so graduated that shells could be made to burst at a desired height above the ground and at almost any range. Against troops in the open a far greater effect than that of the old case-shot was obtained by the invention of shrapnel shell consisting of a bursting charge surrounded by bullets, the whole enclosed in an outer case. When the shell bursts in the air the bullets spread sidewise and also continue to fly forward with the force of the original discharge. Under good conditions the bullets from a single shrapnel will sweep an area three hundred and fifty yards deep.

All this, as a French gunner neatly put it, resulted in transferring from four hundred to three thousand yards the point-blank case-shot fire of the smoothbore. Since the favorable

difference in range between the field gun firing case and the smoothbore musket had made Napoleonic attacks possible, these improvements in gunnery seem to have reassured soldiers who might otherwise have questioned the prevailing cult of the offensive.

In 1898 the Spanish American War, although it taught little concerning the new gunnery, provided at least one important military lesson: the possible importance of the machine-gun. Since 1870 that weapon had been discredited by the bad handling of it by the French in that conflict. In trying to use it like artillery, they had engaged it at excessive ranges, and it had usually been knocked out by the German gun fire concentrated upon it. In the fighting around Santiago de Cuba the American infantry were accompanied by a Gatling gun battery under an ingenious Lieutenant named Parker. The Gatling was not automatic. It was worked by a crank. Nevertheless Parker was able to show that it was a most effective arm. In the absence of artillery support he was even able to give some protection to assaulting troops by means of an overhead barrage under cover of which they advanced. His demonstrations were too microscopic to be noticed by the armies of the world. Nevertheless they promised still another increase in the intensity of fire power. Automatic machine-guns, playing a stream of bullets like the stream of water from a hose, were already coming into general use, and promised still another increase in defensive strength. Already an automatic machine-gun was estimated to have the firing power of fifty magazine rifles, while with its operator it was little more vulnerable than a single rifleman.

From 1899 to 1902 the British fought with the South African Boers. Except for the Crimean episode, in which efficiency had not been conspicuous, their army had faced no civilized opponent since Waterloo, and had seen active service only in colonial wars against barbarians. As late as 1878 its chief theoretical work, Hamley's "Operations Of War" had revelled in geometrical diagrams of the sort which Jomini had inherited from the Eighteenth Century. Serious military studies had only just begun in its Officers Corps. On their side the Boers

were hardy frontiersmen of European stock, loosely organized and disciplined but excellent shots.

The chief military lesson of the war was that fronts were unbreakable even when very thinly held. With the help of light entrenchments and their magazine rifles three thousand Boers at Modder River successfully held a front of no less than seven thousand seven hundred yards—less than one man to two and a half yards. At Magersfontein the proportion was five thousand Boers to a front of eleven thousand yards—one man to a little more than two yards. At Colenso four thousand five hundred Boers held a front of thirteen thousand two hundred yards—one man to a little less than three yards. The emptiness of the battlefield, already noticed in the American Civil War, became more pronounced. British artillery superiority failed to tilt the scales in favor of the offensive.

As a result of the South African War the quality of the little British army was improved. Musketry was raised to a fine art, manoeuvres became more realistic, and the military education of the Officers Corps was seriously taken in hand. Wisely, since the American Civil War had been fought by improvised armies such as England would have to use for any real military effort, that war was studied, although unfortunately its brilliant manoeuvres attracted more attention than the trench warfare of its final phase. The French too learned something: in 1904 their new Infantry Regulations emphasized initiative, gave Company Commanders more latitude, and articulated the skirmish line into small groups each under an individual leader. The Germans, although their Official Account of the war closed with the sensible maxim that armies should be controlled not by "dead forms" but by "natural, untrammelled, quickening common sense," were not always so happy. They attributed the British "shrinking from frontal attack" not to the inherent difficulties of such attack in the face of magazine rifles and smokeless powder, but to misgivings on the part of the British officers as to their own ability, together with a corresponding loss of confidence on the part of the British rank and file. This criticism was, however, a piece of German military conceit. The British regulars were disciplined troops and the British Colonial irregulars men above the conscript average in

combativeness. Frontal attacks were simply not worth making. Throughout Europe horse-worshipping soldiers, noting the success of a single cavalry charge—at Elandslaagte—deceived themselves into believing that such success might still be expected.

In 1904 came the Russo-Japanese War, the first clash between great powers since '71. The Japanese population was somewhat over fifty millions, the Russian over a hundred and forty millions backed by resources much greater than Japan's. Both opponents were conscript but neither had been training their entire annual classes; in Japan the proportion trained was only about a fifth. Although the balance of material resources was heavily in favor of Russia, this was counterbalanced by bad communications and by the weakness of the Russian government. The theatre of war in Manchuria and Pacific Siberia was connected with European Russia only by a single track railway nearly four thousand miles long, with a gap at Lake Baikal; and within Russia itself a strong revolutionary movement existed.

The land fighting took place in Manchuria, then nominally a part of China but under the control of Russia. Between Lake Baikal and Vladivostok, the Russian trans-Siberian railroad ran for about a thousand miles across Manchuria. At Harbin it threw off a branch which ran over six hundred miles southwestward through Mukden and Liao-Yang to the Russian fortress and naval base of Port Arthur at the tip of the Liao-Tung peninsula. This branch railroad was the axis of the land operations. Manchurian roads were almost invariably bad.

The Japanese plan was to take Port Arthur, the one Russian port in the Pacific free from ice throughout the year, then to beat the Russian armies until the Russian government became convinced of the uselessness of going on. Accordingly the Japanese fleet blockaded the Russian fleet which remained in Port Arthur, and although the Russian squadron remained in being, the Japanese armies boldly landed. Kuropatkin the Russian commander-in-chief in the Far East, seeing correctly that he must gain time, planned to retreat without fighting until he had drawn the Japanese inland and weakened them by

the maintenance of a long line of communication. On the other hand the Russian government and War Department unwisely despised their enemy. When an officer who had been appointed military attaché to the United States and had passed through Japan on his way home to receive his final instructions reported that the Japanese army was efficient, his appointment to Washington was cancelled on the ground that no such fool should be allowed to represent Russia at Washington. As a result of this contempt considerable Russian detachments were advanced too far and were beaten by superior Japanese forces. Port Arthur, the main base of the Russian Pacific fleet was besieged on the land side in May. To anticipate events, the Russian squadron accomplished nothing and the place itself, after a stubborn defense behind incomplete permanent works generously supplemented with temporary fortification, finally surrendered in January 1905. The effectives of the garrison, originally forty seven thousand, were reduced by half before the surrender but the attacking Japanese had suffered nearly sixty thousand casualties and had about half that number of men sick.

The rest of the land fighting consisted of a steady Japanese pushing of the Russians northward up the railroad. Late in August the main Russian army stood in a strongly entrenched position near Liao-Yang. The Japanese, slightly inferior in number and struggling forward with difficulty over the roadless country, nevertheless attacked and tried to envelop their enemy. After a confused engagement lasting over a week, the Japanese found themselves dangerously extended in a concave semi-circle more than twenty five miles in circumference, while the Russians in their central position had collected large reserves for a counter-attack on the eastern flank. But when the Japanese by good fortune and resolute fighting were able to check the first stage of this counter-attack, Kuropatkin decided to retreat, although he still had about forty thousand fresh troops in reserve. He drew off his army safely, easily repulsing Japanese attempts at pursuit.

The war now became a test of endurance. Japan was feeling the financial strain and had used all her trained men. Although the internal revolutionary situation in Russia was threatening,

the trans-Siberian railroad continued to deliver thirty thousand men a month in Manchuria, and by October a main army of two hundred thousand faced a hundred and seventy thousand Japanese. Several large Russian attacks were consequently delivered but none was carried through.

Late in February the Japanese, now reinforced to a strength of about three hundred and ten thousand by the arrival of the troops which had been besieging Port Arthur, again attacked. The Russians, about equal in numbers, stood in front of Mukden on a front some sixty miles long. Both sides were heavily entrenched. As at Liao-Yang the fighting followed closely the pattern of trench warfare battles set by Grant and Lee in front of Petersburg. For over a fortnight the Japanese attacked, steadily extending their left or western wing as Grant had done, and beating off Russian counter-attacks. When at last the extended Japanese left had arrived near the railway line in the Russian rear, the latter again drew off their army in safety. On balance the defenders had been more roughly handled than at Liao-Yang, for there the Japanese had lost more than their opponents, whereas Mukden had cost the Russians nearly a hundred thousand in killed, wounded and prisoners while the Japanese had lost only about half as many. Indeed about a quarter of the Russian field forces in the East had now been lost.

None the less the position of the Japanese was becoming very difficult. They had put in every available man, while not a tenth of Russia's strength had yet come into action. The money lenders of the world began to think Russia's chances the better, for in spite of the hostility of Jewish bankers toward her she was able to borrow money on better terms than the Japanese. Even after the Russian Baltic fleet was destroyed in action in May 1905 in Tsushima Straits between Korea and the Japanese archipelago while trying to reach Vladivostok, a final Russian victory could hardly have been prevented had the internal situation of the Czar's Empire been satisfactory. Not the Japanese but the threat of revolution persuaded the Russian government to accept a disadvantageous peace.

The chief military lesson of the war was to emphasize once more that fronts are unbreakable. Once in the October

fighting the Japanese Guards did break a Russian front which had been left without reserves, but this was an exceptional thing, in no way intended by the Japanese Higher Command which had no means of knowing the absence of hostile supports. Only a few of these, had they been present, could have turned the action into a Japanese disaster, for the Guards were in a most vulnerable convex position exposed on its flank. Occasionally a frontal attack strongly supported by artillery could gain ground, but the defenders were always able either to reform to the rear or to retreat without disaster. As usual since the beginning of rifle warfare, only enveloping attacks really paid; and in '04 and '05 the outflanked army was never destroyed. In part this may have been due to the bad Manchurian roads, as European observers were quick to assert; but after all these roads were as bad for one side as for the other. Another cause of the indecisive fighting was the difficulty of co-ordinating the movement of such great numbers.

Although none of the Japanese and only about a third of the Russian field pieces were quick-firers, yet artillery rather than infantry tended to become the decisive arm. Guns engaged in the open were usually knocked out promptly by hostile concentrations of rifle and gun fire upon them, so that both artilleries soon made a habit of taking positions defiladed, i. e. concealed, behind a crest; directing their fire at the command of observers who, unlike the gun crews, could see the target. Nevertheless this indirect fire was effective. Without artillery support the assaulting power of infantry was small.

Entrenching soon became a habit with both sides even on the offensive. On the defensive, the trenches were often strengthened by barbed wire. Against strong field works the attacking artillery had to make long preliminary bombardments as in the old fortress warfare. Machine-guns proved so effective that both sides kept increasing their number of these weapons. Curiously enough, in spite of the steady development of fire power, the bayonet played a slightly greater part than it had done for some time. Much of Manchuria is cultivated with kaoliang, a kind of millet which grows to eight or ten feet, which often enabled hostile troops to approach each other completely under cover. Moreover the numerous

Chinese villages, with their narrow streets and strongly walled buildings, sometimes had to be cleared with cold steel. On the other hand the return to shock action was more apparent than real, for most bayonet charges merely occupied positions from which the enemy had been shelled out.

A distinctive mark of the Manchurian fighting was the length of time required to decide its general actions. Where Leipzig and Gettysburg had lasted for three days, the fighting around Liao-Yang continued for eight and that around Mukden for fifteen, the essence of the matter being the combination of great numbers with the long fronts made possible by modern armament.

In these slow battles the rate of loss per hour fell very low. Eighteenth Century armies had been accustomed to lose eight per cent of their strength in an hour's fighting. In Napoleon's time—with larger numbers and troops of lower quality—the hourly rate had fallen to two per cent. In '66 and '70 it had varied between two and one per cent. In Manchuria the hourly rate of loss fell to one fifth or even to one tenth of one per cent.

As to duration and the length of time required to inflict heavy losses, Ardant du Picq was being abundantly justified; modern armament, far from making combat more instantly murderous and more rapid, was merely making it slower.

The slowness of the Manchurian battles with their tiny hourly rates of loss, above all the renewed proof of the virtual impossibility of successful frontal attack, might well have modified the exaggerated cult of the offensive. It did nothing of the sort. It was enough for the General Staffs of the world that the Japanese had done most of the attacking and had won. The Germans remained as offensively minded as before and the French actually became more so. Foch in his preface to the second edition of his "Conduct of War" noted the slowness of the operations and the prevalence of entrenchment (Even on the offensive . . . "the Japanese infantryman is never separated from his entrenching tool") but failed to connect the two. For him this slowness was due solely to the bad communications of both sides in and to the theatre of war: the wretched Manchurian roads, the seven hundred miles of sea which the Japanese must cross, and the six thousand miles of

single track railroad across Siberia. "The principles of war" he considered unchanged.

In his brilliant but somewhat uneven book "The Transformations of War," published in 1912, the influential French writer Colin echoes Foch in saying: "Progress in firearms invariably favors the offensive. As we follow . . . the working of this law through the centuries, we see the offensive disposing of ever-growing resources for imposing the decisive encounter on the adversary. . . . The more the perfecting of weapons prolongs the frontal fight and allows of an economy of troops necessary to resistance, the more time and resources are available (i.e. to the attacker) for turning movements and the principal attack." Again one marvels at this strange obsession of the French *École de Guerre*. Certain obstacles such as steep little escarpments or unfordable but narrow rivers could indeed be more easily defended in the days of short range weapons than to-day with weapons of greater range. This, however, was only a fragment of the truth. For instance a hill, if less important as an obstacle, might become far more important as an observatory from which long range fire could be directed. The thinness with which modern fronts could be held would not only set free the resources of the assailant for decisive attack upon the defender's flank; it would work equally well for the defender by permitting him to hold out large reserves available for counter-attack. Colin saw that weapons greatly influence the nature of combat, indeed he went so far as to say that they determine its nature; and that ". . . recent industrial and military progress has favored the defensive in frontal fights. . . ." Consequently, as he himself recognized, the decisive attack must be made against a flank. On the other side, as he also saw, ". . . the immense armies mobilized nowadays will hardly be contained by the theatre of operations. In a Franco-German War, . . . if the troops are deployed between Longwy and Hunninguen, their depth would be six men to the yard; it would be three to the yard between Dunkirk and Montbéliard, or between Wesel and Bâle . . . the armies of the future, . . . will be . . . like . . . heavy rollers, crushing all that they pass over. At first sight one is tempted to think . . . such armies . . . un-

suitable for any manoeuvre; one imagines them . . . capable only of marching straight ahead into battle to the shock of brute force." This crude and disturbing possibility—which was to be all too well realized in practice—he put aside on the ground that the Twentieth Century hordes, although they must indeed be deployed widely enough to use their weapons, would not be evenly distributed throughout the theatre of war. We can only wonder why he did not see that under such conditions the chances were against their being any flanks to turn. What would then become of his imaginary "decisive attack against a flank?" The assailant would then be reduced to making frontal attacks in which, as he himself admitted, the defender would have the best of it.

Notwithstanding the clearness of his mind and the breadth of his historical study of war, this colossal error led Colin sadly astray. He grossly overrated the importance of cavalry, believing that it can still charge! Again and again he made unsupported acts of faith in rapidity. If his judgment that future battles would be "encounter battles" in which both sides would operate offensively was to be justified by the first shock of 1914, that was merely because both German and now French military thought equally favored attacking, as he well knew. There was nothing to show that this first shock must be decisive. He might write as he pleased that ". . . the assailing army . . . sweeps all away on its passage." With the seeming exception of 1870, all military history for half a century opposed such a conclusion.

In reading the best theorists of the period just before 1914, with their inextricable mingling of correct and wildly incorrect anticipations, one is reminded of the familiar quotation from Homer: "So he prayed, and a part of his prayer the gods heard, and a part they dispersed upon the empty air."

As one would expect, the chief French partisans of the unlimited offensive were found among the younger Staff officers nicknamed "Young Turks" after the Revolutionary Turkish party who had seized power in that country. In 1911 this faction, dissatisfied with the defensive tendencies of General Michel, then French Commander-in-Chief, succeeded in having him replaced by General Joffre, an engineer officer who had

never passed through the École de Guerre but had served chiefly in the colonies.

The most extreme of the French "Young Turks" and the most influential of the younger French officers immediately preceding 1914 was Colonel de Grandmaison. A favorite pupil of Foch, he pushed the theory of the unlimited offensive to its uttermost limit. Fuller thus summarizes his doctrine: "A man seized by the throat and . . . occupied in guarding himself cannot attack you in flank or rear. Therefore rush upon your enemy with all forces united and overwhelm him." For him all past French disasters had been due to the defensive! In de Grandmaison's own words: "Strike hard, strike all together." And again: "The French army, returning unto its traditions, no longer knows any law other than the offensive. . . . All attacks must be pushed to the limit . . . charge the enemy with the bayonet in order to destroy him . . . this result can be obtained only at the price of bloody sacrifice. All other conceptions should be rejected as contrary to the very nature of war."

These last phrases have a Clausewitzian ring. But how partial and distorted a version of that master's teaching! Although Clausewitz himself had somewhat distorted Napoleon's practice, nevertheless the great Prussian had not forgotten to remind his readers of the greater strength of the defensive.

If we ask how de Grandmaison expected his mad bull offensive to win, we must fall back upon mere will-worship. The Germans could put in line larger numbers than his own country. If the French Seventy Five was somewhat better than their light field piece, on the other hand their heavy field guns were far more numerous. Even if Ardant du Picq's incorrect idea that the sight of approaching assailants must necessarily shake the courage of the defenders had been true, which it was not, still any such moral advantage would be evenly divided, for all the world knew that the Germans too would attack. The German enveloping theory at least took fire power into account, as de Grandmaison's straight-forward rush did not. The self-intoxicated Frenchman would have done well to ponder du Picq's massive opening sentences:

"Man fights not for the sake of fighting but for victory. He does everything he can to cut short the first while making certain of the second"—in other words, to win without loss to himself.

Such was the offensive mania, even less rational in France than in Germany, with which the two great military nations of the world approached 1914.

The idea of a short war depended chiefly upon the cult of the offensive. Many also expected the power of finance to end hostilities quickly. Some put it that no country could afford a long war—which assumed that governments either could not or would not confiscate national wealth wholesale. Others said bluntly that the bankers would refuse to lend the money for a prolonged struggle—which assumed that the money-lenders would remain free agents. An interesting side-light on the supposed relationship of finance-capital to war and peace is a contemporary poem, Kipling's "Peace of Dives," written in 1903:

*"The Word came down to Dives in Torment where he lay:
'Our World is full of wickedness, my Children maim and
slay,
'And the Saint and Seer and Prophet
'Can make no better of it
'Than to sanctify and prophesy and pray.*

*'Rise up, rise up, thou Dives, and take again thy gold,
'And thy women and thy housen as they were to thee of old.
'It may be grace hath found thee
'In the furnace where We bound thee,
'And that thou shalt bring the peace My Son foretold.'*

*Then merrily rose Dives and leaped from out his fire,
And walked abroad with diligence to do the Lord's desire;
And anon the battles ceased,
And the captives were released,
And Earth had rest from Goshen to Gadire.*

*Then answered cunning Dives: 'Do not gold and hate abide
 'At the heart of every Magic, yea, and senseless fear beside?
 'With gold and fear and hate
 'I have harnessed state to state,
 'And with hate and fear and gold their hates are tied.*

* * *

*'The flocks that Egypt pledged me to Assyria I drave,
 'And Pharaoh hath the increase of the herds that Sargon
 gave.
 'Not for Ashdod overthrown
 'Will the Kings destroy their own,
 'Or their peoples wake the strife they feign to brave.*

* * *

*'Hast thou seen the pride of Moab? For the swords about
 his path,
 'His bond is to Philistia, in half of all he hath.
 'And he dare not draw the sword
 'Till Gaza give the word,
 'And he show release from Askalon and Gath.*

* * *

*'Now this is all my subtlety and this is all my wit,
 'God give thee good enlightenment, My Master of the Pit.
 'But behold all Earth is laid
 'In the Peace which I have made,
 'And behold I wait on thee to trouble it!'"*

Nevertheless the important thing about war is not finance but fighting. Had people doubted whether a victory for one side or the other could be quickly achieved, then the uncomfortable possibility of a long-delayed decision would at least have been considered. It was because soldiers everywhere expected to rush headlong upon their enemies and overwhelm them under hurricanes of fire that all the world expected a short war. Here and there older men like the French General Percin, who could remember '71, believed in telling the troops that in war "a check or lost battle is not a total defeat . . .

with perseverance and tenacity everything can be recovered"; such sayings by no means looked forward to future conflicts dragging on year after year like the old wars. The almost universal view was expressed by Major de Pardieu: "Battles in entrenched camps like that at Plevna or Mukden will never take place in a war with the French army," and by General Herr: "The war will be a short one of rapid movements . . . battle will be primarily a struggle between two infantries . . . artillery will be only an accessory arm. . . ."

And yet the lesson of the American Civil War—the defensive strength of the rifle resulting in entrenchment and a long-postponed decision—had been repeated at Plevna, in South Africa, and again in Manchuria. The only exceptions, '66 and '70-'71, had been more apparent than real, both having been due as much to political as to military weakness. Even in '66 and '70 frontal attacks had failed, and in future Franco-German wars the armies would fill the entire theatre of operations so that there would be no flanks to turn.

* * * *

The early Twentieth Century which believed so completely in a short war was a period of intense self-satisfaction. The vast increases in technology, population, and total wealth following in the wake of advancing science, had bred the idea of continuous and necessary progress. If, as Darwin thought, blind but inevitable evolution had made the amoeba into a man, why should not the same process continue indefinitely to carry man upward and on? Although throughout Europe the democratic dogma of the French Revolution had threatened the traditional class system, yet except in France and in little Switzerland democracy seemed to have been halted. Elsewhere hereditary dynasties ruled, and traditional aristocracies enjoyed their old distinction. There had indeed been great concessions to the democratic spirit. The common or "natural" man had been praised in much good verse and impassioned prose. Everywhere there were elected parliaments which were supposed to "represent" the people. But outwardly these concessions of the new spirit seemed to blend peaceably with tradition. In the main, European life still flowed peaceably

through accustomed channels. Innovation seemed to have been successfully combined with stability.

A wiser age would have doubted so comfortable an idea. It would have seen the Twentieth Century social order as the result of a delicate balance between tradition and the all-men-are-equal idea. As we now know, that balance was incapable of resisting a shock. To change the metaphor, the outwardly imposing façade of tradition had been deeply undermined, and each mine was filled with explosives. By 1914 the traditional reverence for kings and aristocrats had been attacked by more than a century of democratic agitation. Although this had touched the masses but little, it had largely converted the middle class of intellectuals and business men, so that the position of the ruling classes—perpetually threatened by democratic envy of one's superiors—was fragile. Moreover democracy was only the chief political symptom of the great movement of thought known as romanticism or romantic-naturalism which had also produced or intensified national feeling. Where the aristocracies had remained strong, notably in Prussia whose mid-Nineteenth Century successes had helped to check the rising tide of democracy, they had done so by identifying themselves with nationalism of the romantic sort which the French Revolution had spread throughout Europe. Thus, rejecting democracy, they had embraced democracy's child. Where the democratic middle class had crushed aristocracy, as in France and still more in the United States, they had by no means produced equality. On the contrary, they had produced inequality in its basest form, for there the leaders of society owed their positions solely to money. Moreover the advance of democratic theory had been accompanied by two disquieting social and economic developments: the rise of finance-capital and the appearance of proletariats. Great wealth and its corresponding power depended no longer upon the ownership of land but upon the control of credit, an anonymous vagabond thing only loosely identified with a given country or people. Over against the huge concentrations of finance-capital stood increasing masses of proletarians, possessing no productive property and living insecurely upon wages. In the alien, Jewish brain of Mordecai, alias Karl Marx, pity

for the proletariat had produced the monstrous doctrine of Socialism which proposed to remedy matters by suppressing the immemorial right to property, stealing all productive capital from its possessors, and giving it to the state to be administered by politicians. Nevertheless the proletarians had so little to lose, and all classes were beginning to suffer so much from the insecurity caused by unlimited economic competition and resulting in violent alternations between booms and slumps, that Socialism was actually gaining ground. Moreover its ideas suited well with the prevailing romantic-naturalism which had produced democracy; Mordecai-Marx had merely transferred the all-men-are-equal idea from politics to economics. Such was the world of 1914 which its inhabitants admired as the summit of progress and the anti-chamber to futures even more glorious.

This self-complacent time also admired its own military institutions. Some indeed deplored the colossal numbers constantly being passed through the conscript armies in a continent which had seen no war between great powers since '71. Others grumbled at the staggering military and naval expenses of the armed peace, for navies as well as armies were taking a heavy toll from the revenues of most civilized states; the American Civil War had shown the power of blockade in such an age of specialized industry. Nevertheless those who objected to the heavy strain of the armed peace were a tiny minority. On the opposite side an able man like the British General Maude could write in the 1910 edition of the *Encyclopedia Britannica* that conscription "... forms even at the present day the chief guarantee for peace, stability and economic development upon the continent of Europe." According to him army expenditure had been the fly-wheel which had steadied the disorganized finance of post-Napoleonic Prussia. Compulsory contact in the conscript Prussian army had compelled the classes to educate the masses, while the intelligence of the better sort of conscripted men had in turn compelled the officers to educate themselves better in order to command the respect of their subordinates. Since the trained German's expectation of life is about five years greater than that of the untrained, about a million Germans were alive and doing good

work in 1910 who without training would have already been dead and buried. Nor was this the whole social and economic benefit from conscription. Capital had been attracted to the country by the security guaranteed by the numerous army, while the working classes were supposed to have become more reasonable in their demands on account of "... the habit of self-respect and the sense of individuality which they acquire in the army." Further, conscript service fits men for "the ... continuous collective effort of organized bodies" required by modern machine industry. Finally, the economic benefits of conscription have been obtained without danger of an aggressive governmental policy, since it was well known that conscripts, unlike professional soldiers, will fight well only for some cause of which they enthusiastically approve. Thus although General Maude held that in Russia the shortcomings of the aristocracy had made conscription less beneficial, yet for Germany he thought it an almost unmixed blessing. Nor was his opinion extreme or eccentric. After the French conscription law of 1872 hardly a man of note in Europe publicly questioned the principle of the mass army. The worship of mass was of course akin to the democratic idea with its belief in majorities and the democratic preference for quantity over quality. Not for nothing had a poet of democracy like Walt Whitman written:

"I utter the word democratic, I utter the word en masse."

Stranger still, the early Twentieth Century admired not only its own mass armies but also the prospect of mass graveyards. In other words, the military theory which proposed to use those armies in furious offensives regardless of loss was everywhere applauded. Although the prospect of rivers of blood was not quite as cheerful as mere peace-time conscription, yet no words were too scornful to apply to the limited wars of the past. Except for certain passages in Jomini, not one educated Nineteenth Century soldier had had a good word to say for the Eighteenth Century endeavor to win by skill rather than by fearful sacrifices. Foch, to quote him not as the worst offender but one of the most eminent, never tires of calling Eighteenth Century strategy a false form of war, out of date, "old fencing," "a house of cards," "... the tottering theories and de-

generate forms of the last century," etc. Still another object of Nineteenth Century contempt was the liberal Eighteenth Century use of fortification and especially of entrenched lines. As an anonymous military writer recently said, it was thought manly to wade through blood to victory, effeminate to arrive there dry shod. To quote Lawrence of Arabia as adapted by Liddell Hart: the Nineteenth Century theorists ". . . with Foch their bandmaster at their head, went drumming down the old road of blood into the house of Clausewitz." Such worship of death reminds us of the romantic cult of suicide.

One Nineteenth Century writer was a startling exception. Indeed he himself might have looked out of place in a company of officers in uniform, for he was Mr. I. S. Bloch, a Jewish banker from Warsaw in what was then Russian Poland. Before the turn of the century, after long study and many conversations with officers, he published a huge haystack of a book in six volumes on "The Future Of War In Its Economic And Political Relations. Is War Now Impossible?" An English translation of his sixth volume, embodying his conclusions, was published in 1899.

Bloch turned neo-Napoleonic military theory upside down. For him the cult of the offensive and the corresponding belief in a short war were illusions. He wrote as follows: "When we say that war is impossible we mean that it is impossible for the modern state to carry on war under modern conditions with any prospect of . . . a conclusion by defeating its adversary . . . on the battlefield. No decisive war is possible. Neither is any war possible . . . that will not entail, even on the victor . . . the destruction of his resources and the break-up of society. War has become impossible except at the price of suicide."

His reason for this was the enormous strength of the modern defensive. He credits Moltke with the saying that the altered condition of warfare will make decisions impossible in less than two years ". . . because all wars will necessarily partake of the character of siege operations"—which sounds as if the great Prussian had been studying the American Civil War which he professed to despise. But for the banker-strategist

"the outward and visible sign of the end of war was the magazine rifle."

Since the accepted military theory did not adopt this idea, he foresaw attempts at Napoleonic offensives, but for them he prophesied a miserable end: "At first there will be increased slaughter . . . on so terrible a scale as to render it impossible to get troops to push the battle to a decisive issue. They will try to, thinking that they are fighting under the old conditions, and they will learn such a lesson that they will abandon the attempt for ever. Then, instead of a war fought out to the bitter end in a series of decisive battles, we shall have . . . a long period of continually increasing strain upon the resources of the combatants. The war, instead of being a hand to hand contest in which the combatants measure their physical and moral superiority, will become a kind of stalemate, in which neither army being able to get at the other, both . . . will be maintained in opposition to each other, but never being able to deliver a final and decisive attack. It will be simply the natural evolution of the armed peace, on an aggravated scale . . . accompanied by entire dislocation of all industry and severing of all the sources of supply by which alone the community is enabled to bear the crushing burden of the armed peace. It will be a multiplication of expenditure . . . accompanied by a diminution of the sources by which that expenditure can be met. That is the future of war—not fighting, but famine, not the slaying of men, but the bankruptcy of nations and the break-up of the whole social organization."

On account of the rapidity, range and accuracy of modern rifle fire, "Certainly, everybody will be entrenched in the next war. It will be a great war of entrenchments. The spade will be as indispensable to a soldier as his rifle. The first thing every man will have to do, if he cares for . . . life at all, will be to dig a hole in the ground, and throw up as strong an earthen rampart as he can to shield him from the hail of bullets which will fill the air. . . . Battles will last . . . (for) . . . days, and at the end it is very doubtful whether any decisive victory can be gained."

From a certain French Captain Nigote, described as formerly a professor, Bloch quotes the following prediction as to future

battles: "The distance is 6,000 metres from the enemy. The artillery is in position, and the command has been passed along the batteries to 'give fire.' The enemy's artillery replies. Shells tear up the soil and burst; in a short time the crew of every gun has ascertained the distance of the enemy. Then every projectile discharged bursts in the air over the heads of the enemy, raining down hundreds of fragments and bullets on his position. Men and horses are overwhelmed by this rain of lead and iron. Guns destroy one another, batteries are mutually annihilated, ammunition cases are emptied. Success will be with those whose fire does not slacken. In the midst of this fire the battalions will advance.

"Now they are but 2,000 metres away. Already the rifle-bullets whistle . . . and kill, each not only finding a victim, but penetrating files, ricocheting, and striking again. Volley succeeds volley, bullets in great handfuls, constant hail and swift as lightning deluge the field of battle.

"The artillery having silenced the enemy is now free to deal with the enemy's battalions. On his infantry, however loosely it may be formed, the guns direct thick iron rain, and soon . . . the earth is reddened with blood.

"The firing lines will advance one after the other, battalions will march after battalions; finally the reserves will follow. Yet with all this movement in the two armies there will be a belt a thousand paces wide, separating them as by a neutral territory, swept by the fire of both sides, a belt in which no living being can stand for a moment. The ammunition will be almost exhausted, millions of cartridges, thousands of shells will cover the soil. But the fire will continue until the empty ammunition cases are replaced with full.

"Melinite bombs will turn to dust farmhouses, villages and hamlets, destroying everything that might be used as cover, obstacle, or refuge.

"The moment will approach when half the combatants will be mowed down, the dead and wounded will lie in parallel rows, separated one from the other by that belt of a thousand paces which will be swept by a cross fire of shells, which no living being can pass.

"The battle will continue with ferocity. But still those thousand paces unchangingly separate the foes.

"Who will have gained the victory? Neither."

In such a stalemate or deadlock ". . . soldiers may fight as they please; the ultimate decision is in the hands of famine." Not generalship but economic factors, or rather the capacity of civilians to resist economic pressure, will be decisive: ". . . the quality of toughness or capacity of endurance, of patience under privation, or stubbornness under reverses and disappointments . . . in the civil population will be . . . the deciding factor in modern war."

Lest the reader imagine Bloch as a kind of superman inspired with an infallible gift of prophecy, it is well to note that he was wrong on many points. He thought little of machine guns. He mistakenly considered rifle fire deadly at a thousand or even at two thousand yards; whereas only a considerable number of highly trained men, shooting all together, can produce any effect at a thousand. Even with experts the maximum effective range of the rifle is that at which one can see one's shots strike the earth in order to correct their aim. He thought that smokeless powder would greatly increase the effectiveness of guerilla warfare such as that waged by the French population against the German invaders in '70. Even as to the economics of war he erred greatly. His remark that a single hostile cruiser loose on one of the great English overseas trade routes would enormously increase food prices in England implies a continuance in war of the free movement of prices as in peace. Government wartime price fixing he seems not to have imagined. Again, since Russia and Austria were the only European countries with a surplus of home grown food-stuffs, isolating this one factor, he wrongly imagined them to be better able than their allies or enemies to stand the strain of a long war.

Thus, as with the best of those who would forecast the future, his predictions were partly true and partly false. Unhappily for the world the military theorists in vogue up to 1914, however correct on this or that important detail, were grotesquely wrong on the main point. Soldiers like Von der Goltz, Foch or Colin knew far more about the mechanics and effects of fire

than this armchair strategist. By fits and starts they also realized the effectiveness and probable universality of entrenchment. But he, leaving his bank or his study for an occasional chat with some officer—who probably did not take him too seriously—saw the colossal reality which escaped them all.

Two soldiers agreed with Bloch. The French Colonel Mayer, writing in 1902 in the "*Revue Militaire Suisse*" on "The Battle of the Future," foresaw "two human walls face to face and almost in contact, separated by the width of the danger zone . . . will remain almost immobile in spite of attempts to win success. . . . One will try to overlap the other . . . but . . . the line will stop on a strong supporting point, an ocean, a mountain, a neutral frontier." He therefore expected a decision from "outside factors" such as blockade, famine, exhaustion of economic and financial resources, finally moral strain upon the populations subjected to such an ordeal."

After the Russo-Japanese war in the "*Royal Engineers Journal*" for January 1907, an English Captain (now Lieutenant-Colonel) C. E. P. Sankey also supported Bloch's thesis. This reflective officer had noticed first that in recent campaigns, especially in Manchuria, decisions had been achieved only slowly, after entrenched fighting much like siege warfare; second that the numbers available to the conscript powers of continental Europe would be sufficient to man their entire frontiers. Consequently, so he assumed, ". . . contact will . . . probably be obtained along some line . . . limited only in extent by the length of common frontier. The infantry . . . will take up entrenched positions, the flanks of which will be secured by political rather than by natural obstacles." Then "each force will have taken up an entrenched position within striking distance of the other. . . . Each army will then practically become the garrison of an enormously extended fortress." From such a situation he foresaw siege warfare, with sapping and mining, mortars, heavy artillery, and the necessity for frontal attacks.

On the other hand he differed from Bloch in not expecting a decision by famine. Taking into account not only the enormous cost and moral strain of mass warfare to belligerents but also the interference to world trade, he supposed that "the sur-

rounding nations"—by which he seems to have meant those previously neutral—would "compel" that one of the belligerents whose entrenched line was first pierced to admit defeat "and to pay an indemnity or cede territory as the case may be."

In a more rational age Bloch would have had more followers. Romantic naturalism however, with its praise of "spontaneous" instinct and appetite, had dethroned reason. Eighteenth Century moderation and decorum were no more. When they were remembered at all, it was to despise them. Throughout the generation preceding 1914, notwithstanding the triumphs of physical science and the vast accumulation of technical data in every field of knowledge, not reason but passion ruled mankind.

Romantic democracy, having survived in 1793 by adopting "absolute" or "unlimited" warfare, had deeply infected even those countries which it had not yet conquered. For what such things were worth, even the remaining autocratic countries had votings and parliaments. Everywhere hymns of praise were raised to the common man. Outside of clerical circles the idea that all men are sinners was unfashionable. As a political motive religion had retired into the background. The theory of political equality, successfully parodying the old religious idea of spiritual equality, was advancing into the economic sphere in the form of Socialism and Communism. With moderation and decorum at a discount and religion subordinate, the appetite for material wealth competed with the romantic-naturalist worship of all the instinctive appetites as the chief motive of mankind. Nationalism, historically the child of democracy, was carried forward both by materialism and by romantic idealism. On the material side the nations had become competing economic units whose victories and defeats were reflected in higher or lower profits and wages. On the ideal or moral side the weakening alike of religion and of a common culture based upon reason intensified and deformed the natural human love of country. Nationalism, or, if you prefer, patriotism, is far from base. A man may serve his country with high devotion; indeed many millions were about to do so. Only when love of country substitutes itself for God does it become idol worship. It may then become the worship of a very ugly idol indeed.

The economic motive—a polite way of saying greed—was

not purely nationalistic. It also inspired the only two internationalisms produced by the democratic era: that of the bankers and that of the socialists.

Ironically enough, in so nationalistic an age, the war for which the world had been so long and so strenuously preparing was to be fought not between single nations but between groups of nations. Thus the patriots of every country would be fighting not only each for his own native land but also for allies of whom he usually knew little. His one real bond with them was that their governments were allied with his own.

Briefly, Germany and France each had one certain and one uncertain ally. Germany could count upon Austria and, more doubtfully, on Italy; all three being united in the so-called Triple Alliance. Italy however was unfriendly to Austria, which power was a traditional enemy and still retained certain Italian-speaking districts. Moreover the Hapsburg monarchy had given Italy a perfect legal case for doing as she chose in case of war. The Triple Alliance had provided that Italy should have territorial compensation in case Austrian territory was increased, in 1908 Austria had formally annexed certain Turkish provinces which she had long administered but she had not compensated Italy. On the other side France was allied with Russia and had a "cordial understanding" of a warm but vague sort with England. England had moved toward the Franco-Russian combination when Germany had begun to build a powerful battle fleet. There had previously been much sympathy and mutual admiration between the two powers, so that the growing competition between their manufacturers had not been enough to make the two nations hostile. But now the new German navy challenged England. Thus Prussianized Germany was left with only a single sure friend, Austria, among the great powers of Europe.

As we have seen, all the continental countries were conscript. Consequently war between the two alliances would be on a scale never before seen on earth. All armies considered infantry the decisive arm and measured their strength chiefly in terms of infantry numbers. All, in the Revolutionary-Napoleonic and Clausewitzian manner, looked forward to a total overthrow of their opponents by means of the military destruc-

tion of the hostile forces, through violent offensives pushed home regardless of loss. At sea it was a different matter, for the huge and complex fighting ships had become so costly that even the richest nations could afford only a few, and their construction was so intricate that their replacement would take years. Consequently those which existed had a scarcity value far greater than that of the highly trained long-service regular soldiers of the Eighteenth Century. Twentieth Century governments and their admirals would therefore be even more cautious with their ships than Eighteenth Century commanders had been with their armies. On land, however, where democracy and conscription had made men cheap, blood could be spilt lavishly. However if the first land fighting brought speedy victory for one side or the other, sea power might not be important.

Notwithstanding the extent of the coming struggle, the opening moves on land would depend chiefly on the war plans of France and Germany.

The French plan need not long detain us. Its leading idea was simply a frontal attack northeastward between the Vosges mountains and the border of Luxemburg. Nothing was left of the lozenge idea except that one of the five French Field Armies was to concentrate a little in rear of the center. Another, slightly in rear of the left, was to face the eastern part of the Franco-Belgian border. Since the Germans would be superior in numbers, there was no material reason to hope for success except the superiority of the French field gun, the seventy five, over the German. Frenchmen might believe with Foch that their individual soldiers would prove better. As the future Marshal had put it: "We, the French, possess a fighter, a soldier, undeniably superior to the one beyond the Vosges in his racial qualities, activity, intelligence, spirit, power of exaltation, devotion, patriotism." Indeed?

A grave weakness of the French plan was the lack of reliable and detailed knowledge of the German forces and intentions. This ignorance resulted from the Dreyfus case. When at last, notwithstanding the strength of the evidence against Dreyfus and his two condemnations, the pro-Jewish party had won its complete victory over the army command, they had destroyed

the admirable French Army Intelligence service. Thus the French Staff, compelled to rely upon civilian detectives for their information, was largely in the dark. Although they knew in a general way that the Germans would probably come through Belgium, they greatly underestimated the width of the intended German sweep because they did not know that the Germans meant to use reserve divisions from the first days of mobilization.

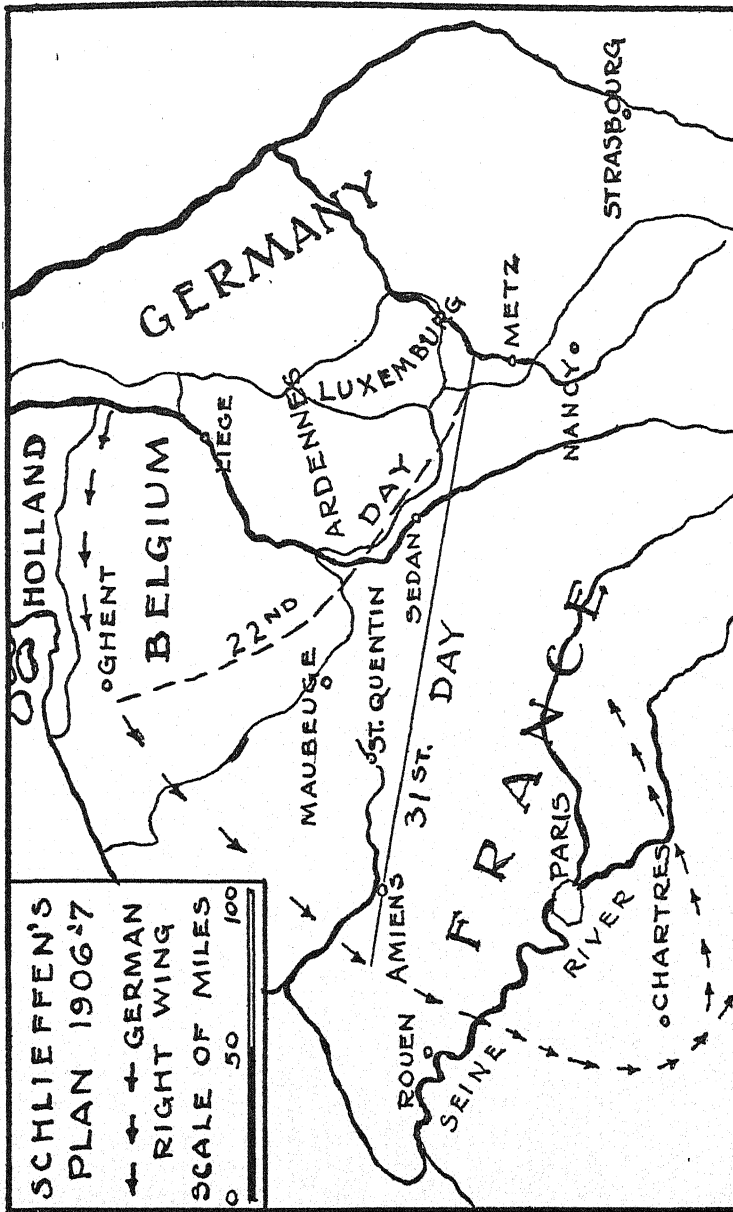
The German plan was far better than the French. It was named after Count Von Schlieffen who had been Chief of Staff from 1891 to 1906, and its leading idea was the rapid destruction of the French army by moving through Belgium to envelop the French left. Schlieffen had reasoned thus: against France and Russia he must fight on two fronts and with inferior numbers even after counting the Austrians. On the other hand, Germany's central position could be used to throw most of her strength against either of her two separated opponents. Could either France or Russia be promptly crushed, Germany could then use her full force against the other. Against the Russians no prompt decision could be hoped; nor were they immediately to be feared, since they could mobilize and advance only slowly. The French on the contrary, although their mobilization would be somewhat slower than Germany's, would nevertheless become formidable much sooner than the Russians. Accordingly it was best to begin by attacking France.

How then was France to be attacked? To break the strong line of French fortresses facing the Franco-German frontier might prove a long business. Even without those fortresses, still the hundred and seventy five odd miles of frontier between Luxemburg and Switzerland gave insufficient space for the enormous German numbers to deploy. Ever since the great Von Moltke the Prussians had known better than to try to break an adequately defended front. All their successes had been won by enveloping the hostile flanks. Their greatest triumph, Sedan, had resulted from a complete surrounding of their enemies. Von Schlieffen himself in his "Cannae" had developed at length and with a wealth of historical illustrations the idea that envelopment was the royal road to the annihilation of one's enemy in battle. While the French Command had been going astray—

first in the direction of mass strategy after a fashion suitable to Napoleon's day but without relation to the colossal Twentieth Century hordes, second toward mere frontal attacks sustained chiefly by the mysticism of the offensive—the Germans had developed a sound theory of linear strategy. Given the resources and communications of any theatre of war, there is a limit to the number of troops which can be usefully employed in that theatre. If you exceed that limit by jamming in too many troops you weaken instead of strengthening yourself, because your men can neither move nor find elbow room to use their weapons. You have produced the military equivalent of a traffic jam. The only way to use more men effectively is to widen the front. To do so against France meant going through either Switzerland or Belgium.

If there be such things as international morals, then the unprovoked invasion of either Switzerland or Belgium would be a crime, for both were neutral states. Indeed the neutrality of Belgium had been guaranteed by a European treaty which the Hohenzollerns, now Emperors of Germany, had signed as Kings of Prussia. Moreover England for her own sake was interested in Belgian independence, and seemed almost certain to fight if Belgium was invaded. On the other hand Belgium, except for the Ardennes district in her southeast corner, is good campaigning country, and the Belgian army was weak; while Switzerland is rugged and the Swiss army was at least better than the Belgian. Accordingly Von Schlieffen decided to go through Belgium.

The proposed invasion of Belgium, however criminal, and however reminiscent of Frederick the Great, was by no means an isolated crime. Other governments had violated other neutral states. As we saw in Chapter III, in May 1796 Napoleon, then the servant of the French Directory, had taken Milan from the Austrians by crossing the Po at Piacenza, thereby violating the neutral duchy of Parma to which Piacenza belonged. In 1801 and again in 1807 England had violated Danish neutrality. Moreover the subtle Schlieffen hoped, by taking advantage of the rapidity with which Prussianized Germany could mobilize, to make his enemies seem the aggressors. As Bismarck in 1866 had purposely delayed the Prussian order for mobilization until



the slower Austrian mobilization had been ordered, so he now planned to threaten but not to cross the Belgian and perhaps the Dutch borders until the last possible moment, believing that the French might thus be frightened or tempted into advancing into southern Belgium in order to strengthen their own position.

Besides being subtle, Schlieffen was extremely bold. Not only did he cut to the bone the forces which he proposed to leave on the eastern front opposite Russia, he also economized greatly on his left wing in the west in order to strengthen his right. In the last version of his scheme, with which alone we need concern ourselves, that left wing was to stand strictly on the defensive. Meanwhile the right, pivoting on Metz, was to make a tremendous sweep covering most of Belgium, and so into France. The extreme right was to pass through Amiens, cross the Seine not far above Rouen, and move on Chartres. From Chartres its direction was to be southeastward until the mass of the French army surrendered. A French attack northeastward between Strasbourg and Metz would play directly into Von Schlieffen's hands, for the further the French advanced in that direction the more certainly would they be cut off and destroyed by the powerful German right. The whole scheme was worked out in the greatest detail. Indeed the marches were set to a regular time-table. On the twenty second day after mobilization the extreme right was to have passed through Ghent while the right center was approaching Maubeuge and Sedan. On the thirty first day the extreme right was to be in Amiens and St. Quentin. It was said that Von Schlieffen's last words as he lay dying in 1913 were "Make the right wing strong." Knowing the extreme speed of their mobilization, the Germans had much reason to hope.

On the other hand the German plan, although far sounder and more hopeful than the French, was not without weaknesses. It was over-theoretical, not only in its elaborately calculated time-table but also in its essence, for such an enormous sweep by such vast numbers must prove most difficult to regulate. Nor was the plan ever to be executed by its author, for in 1906 Schlieffen was relieved as Chief of Staff by the younger Moltke, a nephew of his great namesake but not a man on Schlieffen's level. Although he kept the main lines of his predecessor's

scheme yet he weakened it by shifting certain troops from the right to the left, apparently through fear lest the French might succeed in occupying some German territory, although we have seen that that would have been the worst possible thing for themselves. Next, as if to clear himself of the charge of timidity, he planned to use his strengthened left for a secondary attack southwestward in the direction of Nancy. Moreover he dropped Schlieffen's idea of pausing on the German side of the Belgian and Dutch border in order to frighten the French into being the first to enter Belgium. Instead he proposed to take Liège, the great east Belgian fortress, as quickly as he could. Thus Germany would be the aggressor in appearance as well as in fact.

In 1914 came the long expected clash. A young man connected with the agitation for a South-Slav state which should be a greater Serbia murdered an Austrian arch-duke. Austria, encouraged behind the scenes by Germany, sent an ultimatum to Serbia proposing conditions so humiliating that they would practically have destroyed Serbian independence. She did not notify Italy of her intention to invade Serbia, although the Triple Alliance bound her not to move in the Balkans without Italy's knowledge and consent. The Serbs accepted most of the Austrian ultimatum but reserved certain points, and Russia, the great Orthodox Slav power, began her slow mobilization in sympathy with her Serbian brothers in speech and in religion. At this point the unwieldiness of the mass army began to dictate German policy through the argument from "military necessity"—really military expediency. To allow Russia to mobilize unmolested meant the loss of the advantages expected from the carefully planned German swoop. The Germans permitted strategy to dictate policy. They began their rapid mobilization, meanwhile offering France humiliating conditions in return for her neutrality. When the French refused, the Moltke variation of the Schlieffen plan was set in motion and the German advance guards crossed the Belgian border. At this the British cabinet by the narrow majority of one decided for war. Meanwhile Italy, taking advantage of her legal right arising from Austria's failure to notify her, remained neutral.

Throughout the process every other motive was mingled with

fear. The Austrians feared Serbian and other nationalist agitation. Russia feared the consequences of German and Austrian dominance in the Balkans and Turkey. The French feared Germany. The Germans feared both France and Russia. England feared German control of the Belgian Coast. To such a pass had the armed peace brought Europe that in their mutual terror the nations flew at each other's throats.

For the first time since Waterloo most of Europe was marching. For the first time in history armies of many millions were about to meet. The conscript army and romantic nationalism, monstrous twin children of democracy, had brought mass warfare to its culmination.

Over the marching columns, however, there hovered an almost invisible specter: the possibility of a long war. A French military Manual of 1913 on the handling of large units, "*La Conduite des Grandes Unités*," had said: "the purpose of military operations is the destruction of the enemy's organized forces,"—so far this was pure Clausewitz, but now the specter of calamity faintly appears against the summer sky— . . . "the great numbers . . . the difficulty of re-supplying them, the interruption of the social and economic life of the country, all urge . . . a decision . . . within the shortest possible time." Yes, but suppose the vast mutual efforts cancelled out? Then the specter would materialize indeed.

In a long war to be decided by famine it would be the women and children who would suffer most. Such food as there was would have to go to laborers and soldiers.

CHAPTER VI

Mass War Collapses

"They went drumming down the old road of blood."—

LIDDELL HART, PARAPHRASING "T. E. LAWRENCE."

*"Has the victor really rejoiced in his victory?"—VON
SEECKT.*

THE WAR of 1914-18, the greatest yet fought upon the planet, might be treated in many different ways. One might for instance draw from it countless examples either of human baseness or of heroic endurance under arms. Even for our single purpose of studying the interaction of social and military forms, the narrative might be spun out to great lengths.

Confining ourselves to the bare essentials of the vast affair, the key-note is one of collapse. First the plans looking toward a quick decision broke down. Instead a gigantic siege of Prussia and her Allies was begun. For nearly four years all efforts either to raise or to conclude that siege failed. The final collapse of the besieged was achieved only after efforts and sacrifices so great that the reaction from them has shaken the social order everywhere. For more than twenty years civilization itself has seemed threatened, and the end is not yet.

The fighting divides itself naturally into three phases of unequal length. The first, of about ten weeks from early August to, say, mid-October 1914, is the failure of either side to achieve a prompt decision. The second, from mid-October 1914 to July 18, 1918—three years and nine months, nearly forty five months in all—is that of siege warfare without a decision. The third, of nearly four months from July 18 to November 11,

1918 is filled with the final advances of the besiegers and ends with the surrender of the besieged.

* * * *

As usual in calculating military numbers, careful estimates of the forces about to engage vary widely. The original little British Expeditionary Force of about a hundred and twenty thousand men is the only one as to which authorities agree. The German troops on the Western Front alone in August and September 1914 have been put as low as fourteen hundred thousand and as high as seventeen hundred thousand. The French may have numbered only about a million or as many as sixteen hundred and fifty thousand. One thing is certain: never before had the earth trembled under the tread of such myriads. Moreover behind them stood more millions of trained reservists ready to take the field. When fully mobilized the French would have four millions under arms, the Germans five millions, the Russians even more.

Next we must note the greenness of the armies. Among the Germans only a few senior generals who could remember 1870 had ever heard a shot fired in anger. Of the French, a minority of officers and a proportionately smaller minority of soldiers had seen service in colonial campaigns; the rest were in the same case as their enemies. The German officers and the lower ranking French officers were well trained, but in both armies most of the rank and file already with the colors in 1914 were very young men with an average of less than eighteen months service. Although the reservists now mobilized had once served for two or three years, nevertheless they had since been softened by shorter or longer periods of civil life. The same was true of the reserve officers who held about half the lower ranking commissions. The small British contingent was of a different sort, for it was composed of regulars. Also the little Serbian army had recently seen heavy fighting, but with these exceptions all the armies, Russian and Austrian as well as French and German, were in the main composed of short service troops. The Belgians were hardly better than militia.

Compared with long service regulars, green troops have certain virtues. Under the influence of strong emotion they are

capable of great exertions—which were indeed to be demanded of them under the prevailing military theory. On the other hand they have many defects. They are liable to sudden fits of unreasoning panic. Their officers have little control over them. Their very quality of enthusiasm makes their performance uneven, since all strong emotion is necessarily followed by sharp reaction. Thus the troops who fought the opening battles were, on the whole, of low military quality.

Of the plans for a prompt decision, the first to break down was the French. Within a fortnight of the beginning of serious fighting the original scheme for a frontal attack northeastward was in ruin. After some temporary local successes between Strasbourg and Metz, the French were beaten with heavy loss and were everywhere in retreat. How far this was due to superior German training and discipline, how far to the German superiority in machine guns, how far to the German heavy field artillery, we need not here debate. One chief cause, as we have seen, was the aftermath of the Dreyfus case, the destruction of the French Intelligence Department which condemned the French Command to ignorance of the German intention to use reserve divisions from the very beginning. Consequently, as in 1870, the Germans began the campaign with at least fourteen unexpected Corps aggregating over half a million. The greater efficiency of the French seventy five as compared with the German field gun was not enough to restore the balance. The disastrous frontier battles are said to have cost the French army a quarter of a million men.

At first the German plan went smoothly. The Belgian fortresses of Liège and Namur were quickly taken with the aid of great sixteen inch howitzers borrowed from Austria. The French, who might have stiffened the Belgian defence, preferred their own futile offensives. From the first, German units were subject to extraordinary emotional spasms: Ludendorff who first distinguished himself by rushing the citadel of Liège has recorded how in the night between August 6 and 7 he had to keep walking up and down the line of his troops—already inside the outer ring of the still untaken Belgian forts—in order to prevent their running away, although no enemy was molesting them. The outrages committed in Belgium seem to have

been partly due to fear of the population. None the less the great stream of the invasion flowed rapidly on. In the first shock on the western flank the French and British were outnumbered by nearly three to two. The Belgian army took refuge in Antwerp; the British, who had come into action on the extreme French left in the region of Mons, were only just able to save themselves by hasty retreat. As the invaders rushed forward, it seemed that the surrounding of the French left, the object of the Schlieffen plan, might indeed decide the war by a single blow.

Presently however matters began to go less well for the Germans. That which was to follow has been called the Battle but might more justly be named the Enigma of the Marne. Exactly what happened is not now and probably never will be fully known. Since 1870 German official military histories have been—to put it mildly—noted for their reticences. The essential French documents have been jealously guarded and will probably long remain so.

Picking our way through a haze of personalities and counter-statements, and remembering that the history of war is the history of decisions, let us consider first the opposing commanders.

The German Chief of Staff, Von Moltke, was not physically strong. Before the war he had asked the Emperor to relieve him from duty because of his weak health, and as the conflict of 1914 approached he was taking the cure at a watering place. To resist the strain of active command during battle requires the utmost vigor. All exercise of great power takes its toll from him who wields it, but this most of all. No one who has been even on the outer fringes of that hurricane can ever forget how not only hours but days fly by like minutes. Not for long was the younger Moltke able to ride the whirlwind. As the crisis approached, German General Headquarters, lacking firm control, fell into doubt and confusion of mind.

Next there was the difficulty of control between General Headquarters and the Army Commanders. In part this was due to distance. The over-theoretical German plan must in practice prove difficult to regulate. Its speed called for tremendous efforts from the troops, most of all from those of the all-important First Army on the extreme right. Not only had this

Army the greatest distance to go, it had also the essential task of enveloping the French left and reaching their rear. Consequently German General Headquarters should have been close behind it, so that its action more than that of any other unit should be directed in accordance with the plan as a whole. Here however the dynastic factor intervened. In theory the Commander-in-Chief was the Emperor and the real Commander only his Chief of Staff. Since the Prussian House must sustain its great tradition of war, its Head must be at least as far forward as General Headquarters in the field. On the other hand the Kaiser must neither be endangered nor must he run the risk of rapid and therefore ignominious retreat. Now the all-important First Army was also the most exposed. If matters went wrong it had a better chance than any other unit of being cut off altogether. Consequently General Headquarters could not follow it but was compelled to remain far back. First it was at Coblenz; then, when moved some ninety miles forward to Luxemburg, it was still over a hundred and fifty miles from the region to which the First Army was about to advance. Today the common use of radio telephony—if indeed its messages could be kept secret—would speed communication and the habit of flying would make it easier for the Commander-in-Chief or his Staff Officers to go, see for themselves, and return. Nevertheless such a distance would still be important. In 1914 the Germans organized no regular system of inter-communication by motorcycles and automobiles. The field telephone wires laid down during their advance were often destroyed by accident or by the hostile populations. Accordingly the chief means of communication both between neighboring German Army Commanders and between them and their nominal superior was the wireless telegraph, burdened with the necessary delays for deciphering and decoding, and constantly interrupted by the intentional or accidental interference of the far more powerful French wireless station of the Eiffel Tower.

Beside the physical weakness of Moltke, the bad communications and the distance between General Headquarters and the First Army, there was also between the Commander of that Army and his superiors a barrier due to caste or social rank. At the head of the First Army stood Von Kluck, a man of high

professional competence but of no great lineage. Von Moltke, on the contrary, was noble, and was called by his detractors a courtier General. Moreover Von Bulow, commanding the Second Army next in line to the First, to whom Headquarters from time to time granted a certain authority over Von Kluck, was of a great Prussian family. The Imperial German Officers Corps took such differences seriously, so that there was an acute lack of sympathy between Von Kluck on the one side and Von Moltke together with Von Bulow on the other.

To digress for a moment: should the reader be tempted to despise the weaknesses of the Prussian system, especially the unhappy dynastic influence on the site of their central Post of Command, let him remember the corresponding benefits of that system both before and during the great conflict. It is no small thing for a country to have a single hereditary magistrate at the head of affairs and a gentry which devotes itself to the ill paid trade of war.

To the French Joffre was a rock. The ruin of his original plan, the invasion sweeping on like a tidal wave with its deadly threat of envelopment on his left, the imposed retreat which might have to go no one knew how far and might end no man knew how, none of these things disturbed either his digestion or his power to sleep. As in 1870 the government left Paris for distant Bordeaux. Like Grant in the American Civil War he was imperturbable. Once he is reported to have said that if he must he would retreat to the Mountains of Auvergne more than two hundred miles south of Paris but would even then continue the struggle. At his Headquarters a stirring order for a general counter-attack was drawn up early in the retreat, to be issued—a journalist would say “released”—when opportunity might serve. Under such a leader, although the rapid retreat of his left and the correspondingly rapid advance of the German right continued, nevertheless the French kept up their courage.

Unlike Von Moltke, Joffre actively kept in touch with his subordinates. Staff Officers were constantly coming and going between his General Headquarters and those of the Army Commanders. The Commander-in-Chief in person frequently motored about to learn for himself what was going on. Moreover,

since he was retreating through friendly country, his telephone system remained intact.

Joffre's idea was to withdraw rapidly so as to regroup his compromised armies. As his right was now back on the old line of fortresses, he could draw troops from it to strengthen his threatened left. Men from his depots were also coming in. Using the French railway net which radiated in all directions from Paris, he kept sending to the West such forces as became available, thus gradually building up a new Field Army, the Sixth, on the left of the British. With this, as the German advance continued, he might perhaps turn the western flank of the invasion.

The Allied retreat was successful. Advancing through hostile country, the Germans were able neither to break into the retiring troops opposite them nor to compel these last to stand and fight against their will.

At Luxemburg Von Moltke and his Staff began to be a little uneasy. The lyrical bulletins of victory received from the different Army Headquarters were belied by the small number of prisoners and guns captured. "It is incredible what lies these Army Commanders all tell," Von Falkenhayn, then Minister of War, said shortly afterward. The gigantic Sedan for which Von Schlieffen had planned required that the enemy be pinned, instead of which they were retreating in good order. They might continue to refuse battle and gain time by a prolonged retirement. Indeed this was an idea which the French were certainly considering, as is shown by the flight of their government to Bordeaux and by Joffre's supposed remark about the Auvergne Mountains.

At the same time the invaders were suffering somewhat from their own rapid advance. Men and horses were approaching the end of physical endurance. The very speed of their rush made them outrun their food supplies; the German Crown Prince himself is said to have once eaten raw turnips. Losses in action could not be made good, there was much straggling, and a measure of disorganization sufficient to trouble officers accustomed for nearly half a century to the regular routine of an unbroken peace.

Meanwhile through the third and fourth weeks in August the

Russians were pouring into East Prussia. Had these eastern Allies of the French consulted only their own particular interests, they would have waited until the slow mobilization of their enormous numbers was well advanced, and only then would have gone forward. Instead they listened to the urgent appeals which poured in upon them from France. To leave their friends unsupported would, they felt, be shameful. It might also in the long run be disastrous, for if the Germans could cripple the French Army, which seemed all too probable, then the Russians themselves would in time feel the full weight of Germany. Therefore, the Czar's government acted with a combined chivalry and wisdom hardly to be praised too highly, urging some twenty three divisions of their Active Army forward into East Prussia, and at the same time pressing hard against the Austrians in what is now southeastern Poland. In so soon forcing the fight against the Germans, they well knew that their move might end in a heavy local disaster to themselves, as indeed it was about to do. Nevertheless their gallantry, however forgotten today, was not wholly without reward.

East Prussia was a province precious to Imperial Germany. There the Hohenzollerns had first been called kings, and there many of the more influential Prussian squires had great estates. Consequently when refugees from that district began pouring westward with terrible tales of the Russian invaders, especially of the Cossacks, the German government was greatly moved. The notorious German contempt for all Slavs made the thing seem additionally shocking. On August 20 the Commander of the small German force in the province fell into such a panic as to propose a general retreat.

The immediate result of the Russian move was a decision by Von Moltke on August 25 to take four divisions from his right in the West and send them by rail from Belgium clear across the Fatherland to East Prussia. Before they could arrive the situation there had been restored by the considerable victory of Tannenberg. This however did not entirely lay the eastern spectre, for the Czar's troops continued to beat the Austrians—as if to remind the German leaders that soon they would have to fight on two fronts.

Also the German High Command became nervous about their communications behind their right wing in the West. The Belgian Army still held Antwerp and might sally out. The British might land somewhere on the Belgian coast; their ships might even bring a Russian Expeditionary Force. These menaces had little foundation in fact. Indeed the last had none at all, while the stories of British landings were founded on a single brigade of British marines which landed at Ostend, generously advertising their presence there, and reembarked a few days later. The Belgians hardly counted. We are reminded of what Clausewitz says about the uncertainties of war and the consequent necessity for perseverance and indomitable will in the commander. As the great military philosopher observes, these things cannot be learned from books. A more resolute German Commander-in-Chief would have said: "I must see some of these hobgoblins in the flesh before I will believe in them." In the event the rumors about the Belgian coast were too readily believed at Luxemburg.

It seems that highly placed German officers and especially the weakening Von Moltke began to ask themselves: what would happen if the French went on retreating? Might it not be better to halt on some good defensive line, perhaps even retire a little to such a line, and reorganize? One could then go forward again more surely. The mantle of Von Schlieffen had indeed fallen upon feeble shoulders. A distinguished American officer well acquainted with the German Army believes that their High Command had actually decided to retreat before the coming French counter-attacks began.

Leaving German G. H. Q. we now turn to the situation of the extreme western flank. Bit by bit the French Sixth Army, opposite the extreme German right and even a little to the westward, was growing. On the German side the First Army under Von Kluck and the Second under Von Bulow were still advancing rapidly southwestward as the Schlieffen plan required, both largely out of touch with Luxemburg and acting almost entirely for themselves. Had Von Kluck held his course he would have reached the Seine below Paris, as Von Schlieffen's final scheme had required.

On August 27, however, two things happened: an order re-

ceived from Von Moltke ended Von Kluck's subordination to Von Bulow, and the French Fifth Army opposite the latter turned on him, counter-attacking at Guise. Although the action was indecisive, the French could at least congratulate themselves on having fought without being badly beaten. Von Bulow claimed a great victory; somewhat inconsistently halted for a day to rest his troops; and asked Von Kluck to turn somewhat to the latter's left in order to strike the left of the French. Von Kluck did so, continuing his march so that he advanced ahead of his neighbor. The German First Army now faced almost due south, directly towards Paris.

At the same time the French halted in the East, entrenching the ridge called the Grand Couronné in front of Nancy. There from August 31 to September 6 the Germans attacked them day after day with little success but with constantly increasing forces. Meanwhile the climax approached on the western flank.

Von Kluck had no intention of attacking the French capital. In general it was good Clausewitzian strategy to take for one's objective the hostile armies rather than any bit of territory, even such a prize as Paris. Those armies once defeated, the territorial objectives would fall of themselves. Moreover in a recent German war game with Von Kluck commanding the extreme right as he was now doing in fact, he is said to have been blamed for having taken the great city, so he was unwilling to suffer such blame again. The British and on their right the Fifth French Army, constituting together the extreme left of the original Allied forces which had fought in Belgium, were now in their retreat passing eastward of the Parisian forts. Von Kluck had handled the British so roughly that he now judged it safe to neglect them. Instead he would again wheel to the left, seeking the flank and rear of the French Fifth Army. Could he roll up that Army he would be the agent of a decisive German victory. In turning southeastward he would indeed expose his own right flank and rear to whatever French troops might be around Paris, but nothing yet observed during the campaign had convinced him of the seriousness of that menace. He would send forward to the southeast his Cavalry Corps and four out of five of his Infantry Corps leaving only one behind as flank guard. During the night of September 2 a radio came

from Luxemburg informing him of Von Moltke's intentions to drive the French southeastward away from Paris by means of Von Bulow's Second Army which was to lead the marching wing. His own Army, the First, was merely to follow the Second as flank guard. Since he was now ahead of Von Bulow with a better chance than the latter of turning the French, he continued to advance. On September 3, except for the one Corps facing westward as flank guard, his whole Army crossed the Marne. Paris he hardly reconnoitred, sending his aviation forward to locate the retreating enemy and urging forward his Cavalry to harass them.

Unknown to Von Kluck, the Allies were about to strike back. What with the detachment of German troops for siege-work and for East Prussia, the First, Second and Third German Armies, which on August 23 had had nearly thirty divisions, had lost one division more than they had gained by reenforcement and now stood at less than twenty nine divisions; whereas the Allies who opposed them, thanks to the arrival of new formations and to Joffre's boldness in shifting troops behind the line from his right to his extreme left, had now been built up from less than twenty to nearly fifty divisions. In other words the three German right flank Armies, which had outnumbered their immediate enemies by nearly three to two were now themselves outnumbered by about five to three. When on September 3 Allied aviators reported Von Kluck to be marching southeast, presenting his right flank toward Paris, the Allied opportunity had come. The invaders whose whole plan had been to envelop, were now themselves in danger of envelopment.

Unlike Von Kluck, German G. H. Q. knew something of the westward French troop movements. When—after another of Luxemburg's chronic intervals of ignorance, this time forty eight hours long, as to the First Army—Von Moltke at last learned that that Army was not behind but in advance of the Second, he made another fumbling effort to control events. Having acquiesced in Von Kluck's southeastward turn which had so shortened the great westward sweep essential to the Schlieffen plan, but having failed to hold back his impetuous subordinate as a flank guard, he would now whittle down Schlieffen's idea out of all recognition by using both the First

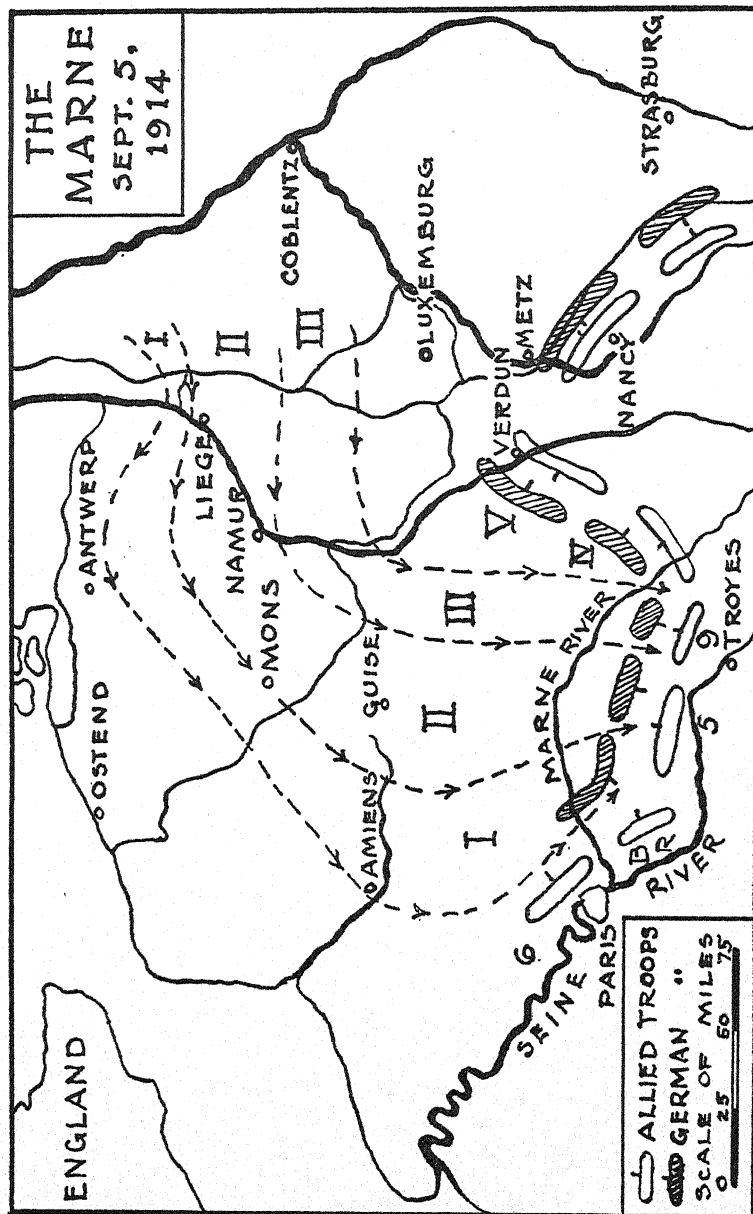
and Second Armies as his flank guard. He would reduce his striking force to the Third, Fourth and Fifth Armies of which the spearhead, the Third, could no longer hope to envelop until after it had broken through the French center, as it was directed to do in the direction of Troyes. This idea he outlined in a radio Directive which he signed in the evening of September 4.

The situation on September 5 is best appreciated from the map. Paris and Verdun, about a hundred and fifty miles apart, were both in French hands. Indeed the forts of Verdun were not being seriously attacked, while those of Paris were destined not to come into action at all. Between the two fortified points the front bulged southward in a great curve against which the Germans were pressing.

A general German victory was still possible. Could the Third Army pierce the French line, then the French right and right center could still be enveloped and destroyed. Nevertheless all German theory had thought the breaking of a front almost impossible. So thinking, and therefore seeking to surround their enemy, the Germans had brought England in against them, and had shocked the conscience of the world by their invasion of Belgium. Yet now at the climax of their effort their immediate aim was not to surround but to pierce.

We may judge of the mood in which the new German plan—if plan it can be called—had been ordered, from an entry made at Luxemburg on September 5 by Von Falkenhayn in his diary: "The German General Staff itself admits today that the French retreat . . . is . . . in complete order, but it"—that is the Staff and especially Von Moltke—"cannot come to a new decision . . . only one thing is certain: our General Staff has completely lost its head. Schlieffen's notes do not help any further so Moltke's wits come to an end."

In his final effort to clutch the victory now slipping from him, Von Moltke had too late seen the need for personal contact with his extreme right. Foreseeing that Von Kluck might again rush forward, the Chief of Staff was sending to the First Army the Chief of his Intelligence Section, Lieutenant Colonel Von Hentsch, to explain his reasons—partly imaginary British land-



ings but partly real French movements—for condemning both the First and Second Armies to the rôle of flank guards.

On the morning of September 5 between six and seven Von Kluck received Von Moltke's radio telegram signed the previous evening. Although the delay in transmission had been shorter than usual, nevertheless the Cavalry Corps and the four advanced Infantry Corps of the First Army had already been on the march for some hours. In the full German tradition of decentralized command, this energetic and determined soldier preferred his own judgment to that of his distant superior. Knowing how he had pounded the British, he rightly judged their immediate offensive power to be low. The earlier elements of the Sixth French Army he had repeatedly brushed aside with such ease that he underestimated the menace to his right and rear. Doubtless he believed the French unable, after such a retreat, to muster either the numbers or morale necessary for a serious counter-attack. Perhaps the flank of their elusive Fifth Army might yet be reached. Still hoping thus to be the hero of a decisive German victory, he would let his units go forward, at least for the day. Either G. H. Q. might later approve his course as before, or at worst he could halt or retreat at his leisure to take up the less glorious task of flank guard.

In the late afternoon however, Von Hentsch arrived, telling his tale of Von Moltke's fears. He was not cordially received: "Another of Moltke's spies!" said Von Kluck to the First Army Chief of Staff when told of his arrival. Nevertheless his imaginary Russian and English landings on the Belgian coast, together with his news of the French Sixth Army's increased strength, at last persuaded the stubborn Army Commander that he must go back. As to the manner of that retreat, on the other hand, he and Von Kluck were as one. There need be no haste. In the evening they were sitting with the First Army Staff drawing up orders for a leisurely retirement north of the Marne in two days, when suddenly the situation changed in an instant. News came from the single Corps which had been left behind north of the river. That Corps had been attacked. It had not done badly, but the French were increasing in numbers and reinforcement was urgent.

In this crisis Von Kluck proved himself an excellent soldier.

Although his four advanced Infantry Corps had marched over three hundred miles in the last thirty days, fighting constantly without a single full day of rest, nevertheless the men of one of them were awakened and started northward at midnight of September 5 towards their hard pressed comrades to the northward. At dawn next day another Corps followed. This left opposite the British a gap filled only by Von Kluck's Cavalry Corps. None the less the risk had to be taken.

While this was going on, the German left was pounding heavily against the Grand Couronné, as it had been doing since the last of August; and the German Third Army was similarly hammering upon the French center, now composed of the Ninth Army Detachment under Foch. Although the assailants of the Grand Couronné continued until September 6 to increase in numbers, the defense held. Foch's line, however, was bent back and seemed about to break.

On September 7, as for the first time the German pressure in the East began to slacken, Von Kluck decided to withdraw his last two advanced Infantry Corps which were still facing southward in touch with Von Bulow's right. Every step of his enforced manoeuvre had been and still was so prompt and vigorous that from the attacked he now became again the attacker. The French Sixth Army, at first held, was in its turn threatened with destruction by the envelopment of its northern flank.

On the other hand, the almost empty gap between the German First and Second Armies was now wider. Already at 2 A.M. on September 7, before Von Kluck's two advanced Corps had left him, Von Bulow had radioed to Luxemburg that he was about to withdraw his right behind the steep valley of the little river Petit Morin.

The action now became a race against time. Could the German Third Army break through Foch, or could Von Kluck on the extreme northwestern flank defeat the French Sixth Army before the British or the French Fifth Army could penetrate the gap between himself and Von Bulow, then the Germans would win. On the other hand, could that penetration be made before either the First or the Third German Army had scored heavily, then the Allies would win. Von Kluck's calculation as

to the British proved not altogether wrong, for they advanced slowly against his cavalry screen, taking as yet no effective part.

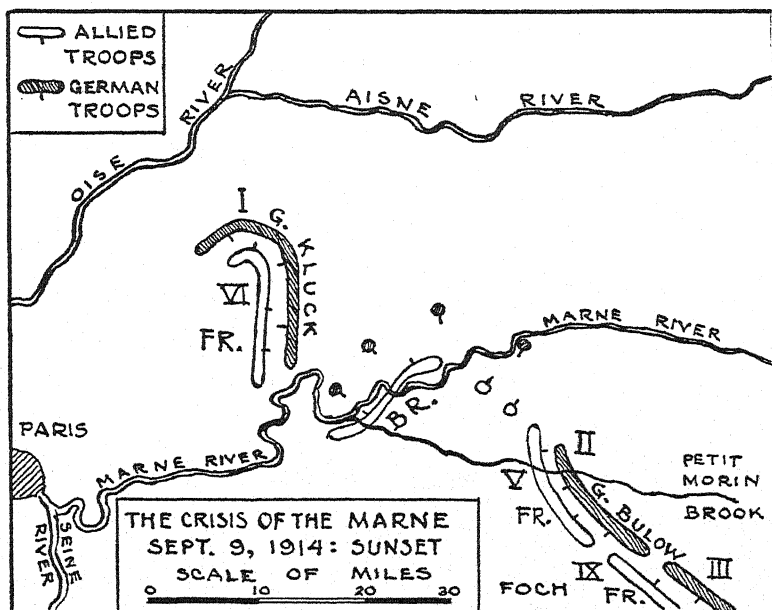
On September 8 in distant Luxemburg the unhappy Von Moltke and his Staff, ill informed and a prey to vague fears, again sent out Von Hentsch to find out what was happening to their center and right, and to regulate matters there. Although German G. H. Q. is said to have thought that no retreat on the western flank was yet necessary, nevertheless—such was the gloomy mood there—"in case rearward movements had been begun" the Chief of the Headquarters Intelligence Section was specifically authorized to coordinate them, with powers as if he had been the Chief of Staff himself.

Like practically all the Germans of 1914, Von Moltke's deputy had never before seen active service. Nor had he had the same chance as officers nearer the front to become hardened to the effects of real fighting. Passing westward from one Army Headquarters to another behind the German line he now worked his way through the inevitable backwash of war: wounded going painfully to the rear, more or less honest stragglers wandering about looking for their units, deliberate skulkers spreading rumors of imaginary disasters. After a month of almost intolerable strain the green German Army naturally produced an abundance of such things. Later he would have been less moved by them, and by the smashed buildings, broken equipment, fresh graves, and unburied bodies which he saw. In the event he was shaken.

Nevertheless in Von Hentsch's westward trip, although he noted some uneasiness among the Army Commanders, he met with no suggestion of retreat before reaching Von Bulow, whom he found in great anxiety. The gap between the Second and First Army was filled only by two Corps of German cavalry. No one at Second Army Headquarters knew any more than Von Hentsch himself what Von Kluck or the British were doing, but the French Fifth Army was pressing forward and threatened to turn Von Bulow's right by means of the gap. Consequently the latter thought retreat only a question of hours. Against this Von Hentsch seems not to have argued.

The critical day was September 9. Although the Sixth French Army was now near disaster, and although the British left which

was the immediate menace to Von Kluck was still unable to cross the Marne; on the other hand the British center and right elements were now—at long last—crossing that river. Foch's men, although giving ground and strained to the limit, were not broken. Indeed—to anticipate events—they were not destined to be. All morning Von Hentsch in his motor was making his way from Second to First Army Headquarters. Ordinarily



the fifty mile trip should have taken at most two hours, but now along these roads the backwash of war was at its height. His car was repeatedly blocked. At least once he was caught in a blind, unreasoning local panic. After more than five hours of interrupted progress he arrived just before noon with an impression of confusion, defeat, and imminent disaster.

About an hour before Von Hentsch's coming Von Kluck's left had been ordered to withdraw a little in order to meet the expected British menace, but the First Army's center and right were still advancing victoriously.

Von Hentsch did not see Von Kluck. Perhaps his reception

by the latter four days before had made him undesirous of repeating the interview. Behind his back the Army Commander, as the reader will remember, had called him "another of Moltke's spies." The officer from Luxemburg now contented himself with talking to the First Army Headquarters Staff and its Chief, Von Kuhl.

The situation, Von Hentsch said, was bad. The Second Army must soon retreat, as its right was being turned. Consequently all the Armies must be moved back. Von Kuhl was not easily convinced. He argued, but as he did so a radio came from the Second Army to say that that Army was retiring. An error in the telegram made the gap between the two German forces even greater than it was—forty miles instead of thirty. Retreat having begun, Von Hentsch now had full powers. He drew a line with charcoal on Von Kuhl's map to indicate the direction of the retirement and left so hastily that Von Kluck learned of his coming only after his departure. At 2 P.M. telephoned orders halted the advance of the First Army's right and center. After so much peril the men of the French Sixth Army, to their amazement, found themselves reprieved.

The Commanders of Von Kluck's right consented to break off the action only after receiving a written order from Army Headquarters—where no one had insisted on a like order from Von Hentsch. The contrast may be significant; Von Kluck and his Staff may have been more willing to be off than they afterwards said. On the other hand Von Hentsch certainly encouraged neither the First nor the Second Army to go on fighting. At all events, on the night of September 9 a general retreat of the invading armies began.

The German plan was in ruins and the German hope for a speedy decision in the West was gone.

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At this point we pause for a moment to note three characteristics of the great action which has been called the Battle of the Marne: confusion, exhaustion, and final decision—insofar as a decision was achieved at all—by threat more than by fighting.

To the actual combatants every battle seems confused. Usually they remember it chiefly as a chaos. At the Marne, how-

ever, the tidal-wave of confusion had swept not only over the fighting men but over their Commanders as well. We have just seen something of what that confusion had been on the German side, but on the French side matters, although better, had been little better. To this we have the high testimony of Gallieni, in 1914 the most distinguished soldier in France and the Military Governor of Paris. Joffre was his Junior, had served under him in Madagascar, and in part owed his appointment as Commander-in-Chief to the advice given to the French government by the older man. Gallieni had been the first to see the opportunity presented to the Allies by Von Kluck's turn southeastward. His urgent pleading had with some difficulty persuaded the not easily moved Joffre to order the attack against the extreme German right. He wrote: "There has been no battle of the Marne. Joffre ordered a retreat on the Seine (that is, from Paris) and the evacuation of Nancy and Verdun. Sarrail did not obey, he saved Verdun. Castelnau held on to the Grand Couronné, he saved Nancy. I took the offensive."

Even if one denies every assertion of Gallieni's, still those who believe the vast action to have been planned throughout by French G. H. Q. have the figures to explain. In number of divisions alone the three German right wing armies were outnumbered by more than five to three. Since many Allied units had received replacements the real odds were even greater, perhaps two to one. How then—if indeed the Allied movements were guided smoothly by a single head—did the Germans come within an ace of victory, then easily disengage themselves and safely retreat?

On both sides the rapidity and scale of the vast affair snatched effective control from the nominally supreme Commanders.

As with confusion, so with exhaustion. Up to a certain point it is universal among soldiers. Among the sharpest recollections of those who have served in arms is the alternation between periods of empty, inactive boredom, and others of unbelievable fatigue. Nevertheless the collective exhaustion of early September 1914 had perhaps never been equalled and had certainly never been surpassed by armies. Napoleon and Clausewitz had worshipped rapidity and violence. The latter had written: "The first . . . principle to observe . . . is to

put in action all disposable forces to their extreme limit of tension." In obedience to such precepts millions of men, most of them recently civilian, either fought or marched at top speed almost continuously for over a month. Such efforts exact their own retribution.

The British who had the hardest task of all, retreated marching and fighting every single day for thirteen days on an average of four hours sleep a night for infantry and three hours for mounted men. One of their officers said: "I would never have believed that men could be so tired and hungry and yet live." Company Commanders, halting their men for a few minutes in the street of some French village and seeing them instantly lie down and fall asleep, found themselves compelled to go down the line kicking them awake and would afterwards remember nothing of the incident. Such things were done in a blur, a sort of sleep-walking. Neither the Germans nor the French were much better off. The latter, fighting on their own soil and thanks to their amazing national energy, were only just able to launch the counter-attacks which caused—or at least coincided in time with—the invader's decision to retreat. The beasts suffered with the men. On September 4, just a month after the first German crossing of the Belgian border and the day before the critical counter-attack from Paris, Von Moltke said to the German Foreign Minister: "We have hardly a horse in the Army that can go faster than a walk."

Ironically enough, after this gigantic action with its universal confusion and its extremities of fatigue, the Germans were not driven back; they retreated in the face of a threat and before that threat could be put into action. In the little limited wars of the Kings before the democratic massacres began, such procedure had been common. An Eighteenth Century General, finding himself so out-manoeuvred by an enemy that for the moment he could fight only at grave disadvantage, would usually retreat. In that wiser day, to shed men's blood deliberately and without reasonable hope of success had been despised as the act of a barbarous fool. It was better that they should live to fight another day and on better terms. From Clausewitz on, the Nineteenth Century philosophers of conflict had unanimously despised this wisdom. To them enlightened self inter-

est led only to a sort of imperfect, sham war, and the only real war was one of the utmost violence with blood as its only argument. Nevertheless, when the Fifth French Army and the sorely tried British were at last approaching the gap between Von Kluck and Von Bulow, the Germans had no stomach for fighting it out. In the best Eighteenth Century manner they retreated before what appeared about to happen.

The idea of limited war was soon to be even more conspicuously avenged.

* * * *

We now return to the story of the campaign. The Germans, retreating, halted and entrenched on the line of the Aisne. The Allies followed but could not drive them further. Besides physical fatigue, another sort of exhaustion was beginning to appear, in all the armies artillery munition was running short. When halted, the Allies too, in order to live in the neighborhood of their enemies, began to entrench. Toward the end of September another German offensive west and south of Verdun failed west of the town, and on the south succeeded only in making good a narrow bridge-head west of the Meuse at St. Mihiel. Meanwhile there was still an unentrenched and more or less empty gap between the western flanks of both lines and the Sea. Through this gap both sides proposed to advance.

These last efforts at envelopment in the west cancelled out. Ironically enough, their mutual failure became known as "the race to the Sea," although not the shore but the enemy was the objective for both. Until the second week in October the Germans were somewhat embarrassed because Antwerp, in their rear, was still in Belgian hands. Also the Allies, through their possession of Paris, the center of the spider web or net of French railways, enjoyed the better communications. Consequently, as the gap gradually closed from south to north, they were the first to establish a fairly continuous line in the northernmost sector. This line was complete on no definite date, for the units of course arrived one by one as best they could. Nevertheless the region was largely empty in the first week of October and was held throughout in some force before the end of the third week, so that October 15, although arbi-

trarily chosen, may stand as the day on which the "race to the Sea" ended. Germany was now enclosed.

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At first the characteristics of the new phase of the war did not fully appear. The Germans were still on the offensive. On October 9 they easily took Antwerp, inexplicably allowing most of the Belgian garrison to escape along the coast and join its Allies. As easily they checked the Allied effort to advance, and for three weeks they pounded hard against the patchwork Allied line. Although they could no longer expect a full and rapid decision in the West, they might still hope to seize the Channel Ports. The possession of these would impede communication between England and France and provide the invaders with naval bases. In the difficult and sometimes desperate defence against the autumn German attacks the British Expeditionary force, which had been brought around from the Aisne by rail, played a part which its country still remembers with a just pride. Such was their rifle fire that the Germans imagined behind "every bush, hedge, and fragment of wall, a machine-gun rattling out bullets." In fact the British had few machine-guns, but since the Boer war they had particularly stressed musketry training. In one exercise called "the mad minute" the soldier was practiced in firing as many aimed shots as he could within sixty seconds, usually about fifteen shots. Indeed throughout the campaign the Germans opposing the Expeditionary Force had often made the same mistake. In Flanders the hard pressed Allies, although here and there pushed back a little, were not broken.

On November 11, 1914—exactly four years before the Armistice which was to come—the Germans ceased attacking and the opposing trench lines stood immobile from the North Sea to the Swiss border.

Interestingly enough, the October and November German attacks in Flanders were not made with veterans of the earlier fighting, although these could have been moved by rail in considerable numbers. They were made with new formations from the interior of Germany under fire for the first time.

Either the German Command thought that troops which had not yet felt the defensive power of modern fire would attack with more dash, or else the men of the first invasion were still exhausted by their efforts.

* * * *

While the armies were fighting the mobile campaigns of the first phase, the people of every conscript power except Austria entered the war in a spirit of solemn national exaltation. Since Austria was in no sense a nation, there could be no such general enthusiasm there. Everywhere else there was an almost unanimous outburst of patriotism. In Russia the groups ordinarily opposed to the Czardom united in dislike of the Germans and in sympathy for the little Orthodox Slav state of Serbia. In the German Parliament the Socialist deputies, who had always voted against war credits, voted for them with hardly a dissenting voice. In faction-ridden France all parties joined in what was called a Sacred Union. Everywhere internationalism and pacifism disappeared before a spirit of uplifted self dedication. Moreover, even in France which could remember the ugly experience of invasion, there was mingled with the universal excitement a note of adventurous pleasure. Everywhere the men went off shouting and singing.

Today we are astonished at such a mood. The next such call was to find all peoples better acquainted with the realities of war. Granted that almost everyone likes at least a small dose of excitement, danger, and war, still one asks in vain for the sources of the universal spirit of 1914. Is a long peace so contrary to the nature of white men? Or are factory work and city life so distasteful to millions that they jump at anything for a change? Or do these things, together with the popular press and what is called "universal education," merely make those millions more excitable—not to say hysterical? However one may answer such questions, the solemn exaltation of 1914 certainly existed.

One nation, England, took the thing somewhat differently. Alone among modern great powers, for centuries she had been an aristocratic state, that is a state in which the masses desire

to be governed by an upper class, in her case called the gentry. Her internal unity; mercantile wealth, great power by sea, and professional army repeated the pattern of former aristocratic states like Carthage and Venice. Like theirs, her masses, although strongly patriotic, were unmilitary. Indeed in her case those masses despised a man for being a common soldier in time of peace. In 1914 they took it for granted that their navy—of which more in a moment—should take command of the oceans as it promptly did. Their aristocratic Officers Corps had always considered war as a kind of sport. Adventurous young men, especially among the gentry, now rushed to enlist voluntarily. But at first much of the nation felt itself aloof from the conflict, after a fashion expressed in the slogan "business as usual." The sight of the Expeditionary Force being instantly hurled back across northern France by the Germans and barely escaping destruction, opened the eyes of those who appreciated what was going on, but by no means destroyed the complacency of the nation at large.

The mind of all countries was affected, and the gap between those who understood reality and those who did not was deliberately widened by the use of what came to be known as "propaganda." Every government used the printing press and especially the daily newspapers to propagate opinions favorable to itself both at home and abroad. The close coöperation between governments, newspaper owners and writers heightened the exalted spirit of the first earth-shaking weeks.

Had the Germans been waging a different sort of war, after missing their first tiger-spring they might have tried to negotiate a compromise peace, using their occupied territories as trading points. An Eighteenth Century government would probably have done so. Such an attempt, however, would have gone counter to Clausewitz' scorn for any "principle of moderation" in war, and to his saying: "War is an act of violence pushed to its utmost bounds." It would also have collided with the universal popular passions inseparable from horde warfare. It might have weakened German morale by suggesting the possibility of final defeat. In fact no such move was made.

* * * *

With the nations in their exalted mood, the war entered its second phase which was to last from the autumn of 1914 until July 18, 1918, nearly four years.

As winter came on, the changed face of the struggle gradually became plain. Had the French armies thrown the Germans back into their own country, then the greater numbers, wealth and resources of the Allies would almost certainly have won for them without undue delay. Had the Germans crushed the French armies, that too would probably have been decisive. They could next have turned their full strength against Russia, and finally dealt with England at their leisure. In the event the gigantic opening efforts of both sides had been halted. The Napoleonic and Clausewitzian idea of making not your enemy's resources and territory but his armies your main objective, smashing those armies with one terrific blow, had collapsed. As I have written in another place, Napoleon and Clausewitz had been knocked off their pedestals and Bloch reigned in their stead. As that Jewish banker had foreseen, famine was to become at least an equal partner with arms in forcing a long delayed decision.

How thoroughly the former military idols had been smashed was not at first seen. In other words, no one could tell how long the war might last. Field Marshal Lord Kitchener, the British Minister of War, said three years, while others among the Allies, especially Joffre, were optimistic. At all events, before the end of 1914 everyone could see that the affair would be much longer than had been expected.

In long wars naval and economic factors become important. In a war quickly decided on land they amount to little. For instance in 1870 the superior French wealth and sea power did not affect the result. On the other hand English wealth and sea power had considerably affected the long Revolutionary-Napoleonic wars. Mahan has indeed exaggerated the influence of the British navy upon that twenty three years' struggle. Had Napoleon not invaded Russia he would have won, and after his Russian disaster he was doomed irrespective of England. Nevertheless sea power had then made it possible for England to continue the conflict and had helped to bring

about the final defeat of the French. It was now to play an even greater part.

In 1914 while the land fighting had been degenerating into the trench stalemate, the Allied fleets and especially the British had swept their enemies from the oceans. The geographical position of the Central Powers made it easy for the superior Allied squadrons to blockade them, for Germany could reach the high seas only by the North Sea, and Austria by the Adriatic and the Mediterranean. Since neither the German nor the Austrian main fleets offered battle, both were effectively bottled up—the more quickly in the German case because the British Grand Fleet had wisely been mobilized a little before hostilities began. An outlying German squadron near the Pacific coast of South America almost entirely destroyed a weaker British squadron of which the shooting was handicapped by the greenness of its crews, only to be similarly destroyed soon afterwards at the Falkland Islands in the South Atlantic by a British force considerably more formidable than itself. For the moment there remained at large only three German light cruisers whose future warfare against Allied commerce was no more than an annoyance.

On the other hand the main German battle fleet continued to influence events merely by remaining "in being." It prevented a close blockade of the German North Sea coast and discouraged the idea of an Allied landing in Denmark. Also it commanded the Baltic, assuring the navigation of that Sea to the Germans, especially for the importation of the excellent iron ores of Sweden, and at the same time forbidding that water to the Allied fleets.

Furthermore the action of two detached German ships considerably affected the war. Finding themselves in the Mediterranean when the fighting began, they succeeded in reaching Turkish waters where their presence encouraged the Turkish statesmen to come in on the side of the Central Powers which they did late in October. Turkey was a threat to Russia in the Caucasus, to England along the Suez Canal in Egypt, and to the British oil supply from Mesopotamia, but her chief importance was that by closing the Dardanelles she cut off water communication between Russia and the Mediterranean.

All told however the sea power of the Western Allies held the Central Powers in a vice. Except for what might reach the latter through the neutrals, that is the Scandinavian countries, Holland, Switzerland, and—for the moment—Italy, Bulgaria, and Roumania, the Allied navies cut off their enemies from traffic with the entire outside world. Conversely those navies permitted their owners to trade everywhere outside of the defended lines of the Central Powers, to the limit of English and French resources in cash and credit. Moreover to the extent that they could control the seaborne imports of Germany's neutral neighbors they could limit her power of supplying herself through those neighbors. In other words the Central Powers were besieged.

On the other hand there was a sort of siege within a siege, inasmuch as Russia's exterior communications, although not entirely cut off, were made difficult. The German grip on the Baltic, together with the Turkish grip on the Dardanelles and Bosphorus reduced Russian outlets for overseas traffic to the Arctic and the Pacific oceans. In the Arctic the only port with railway connections was Archangel which was frozen for much of the year, while the Pacific could be reached only at the end of the interminable trans-Siberian railroad which then had but a single track.

1914-'18 resembled the old sieges not only because the Central Powers were blockaded. As we have seen, the South in the American Civil War and—with lesser effectiveness—Revolutionary-Napoleonic France and other countries in previous wars had been similarly encircled. The second and most of the last phase of the recent great conflict were also like siege-work in the tactics of their land fighting. Everywhere both sides now held prepared positions. On the main fronts the trench lines ran for hundreds of miles, on the Western Front between Switzerland and the Sea those lines ran continuously for over four hundred and fifty miles. If the term siege warfare be too closely identified with permanent works built in peace, at least the conditions which we are about to describe deserve the more inclusive term of position warfare.

Nevertheless the great siege of the Central Powers had special characteristics of its own because of its enormous size,

and these special conditions require mention before discussing the general characteristics of position warfare.

Briefly, the conditions of the vast affair differed from those of the old sieges and favored the besieged Central Powers by blunting the weapon of blockade, by increasing the value of the interior lines possessed by the German coalition, and by depriving the Allied attacks of the advantage of converging fire.

In the old sieges of cities or other small defended areas, the besieged had no productive resources comparable with those of the besiegers. Germany on the contrary, although without the vast accumulated capital of England and France, was nevertheless an industrial nation admirably prepared for war as such preparation was understood in 1914, and of great organizing ability. Against the shortages of food, tropical products and other raw materials soon to be expected from the Allied blockade, she promptly began to husband and develop her entire available resources with the utmost care. In peace time Russia produced a considerable surplus of food for export, but in war her low average of education, primitive social arrangements and bad communications prevented her preparing like Germany to meet the coming strain.

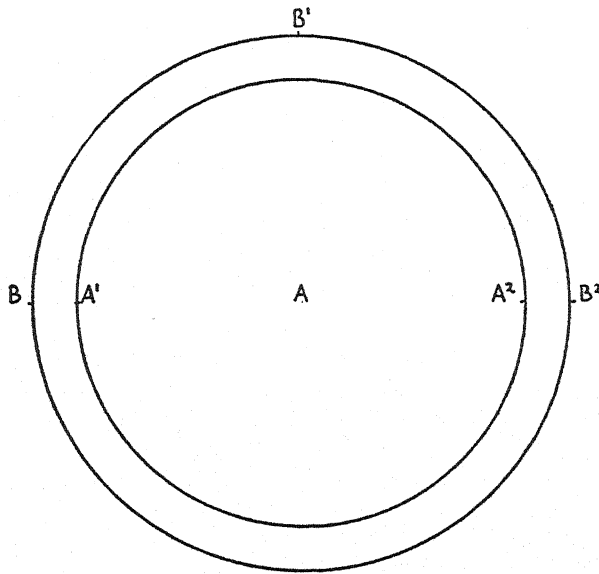
Nor was Germany entirely thrown back on her own resources. Notwithstanding her failure to achieve the prompt decision in the West for which she had planned, her Western victories of the first few weeks had at least given her almost all Belgium together with important industrial regions of France. On her side of the now stabilized Western Front were the Belgian and part of the French coal fields, all the French iron ore, and much of the French industrial plant.

Incidentally the fact that the Western trench lines ran almost entirely through French and Belgian territory protected German soil from devastation.

Moreover great countries are not morally easy to blockade. You cannot cut them off from the world without inflicting hardship on neutrals. Although the Allies need not fear the resentment of the small neutrals bordering on Germany, still they could not treat them entirely at their pleasure. America, the last great power to remain neutral, was in a much stronger

Diagram 1

INTERIOR LINES



A A²

Distance from A to any point on
circumference A'-A²

A' A²

Direct distance A'-A²

Distance along the arc B-B'-B²

position; her opinion and action were of great importance. Until her entry into the war both sides had to consider her wishes, and during that period the Allies did not drastically ration the trade of the European neutrals with the Central Powers.

The points about interior lines and converging fire are diagrammatically simple.

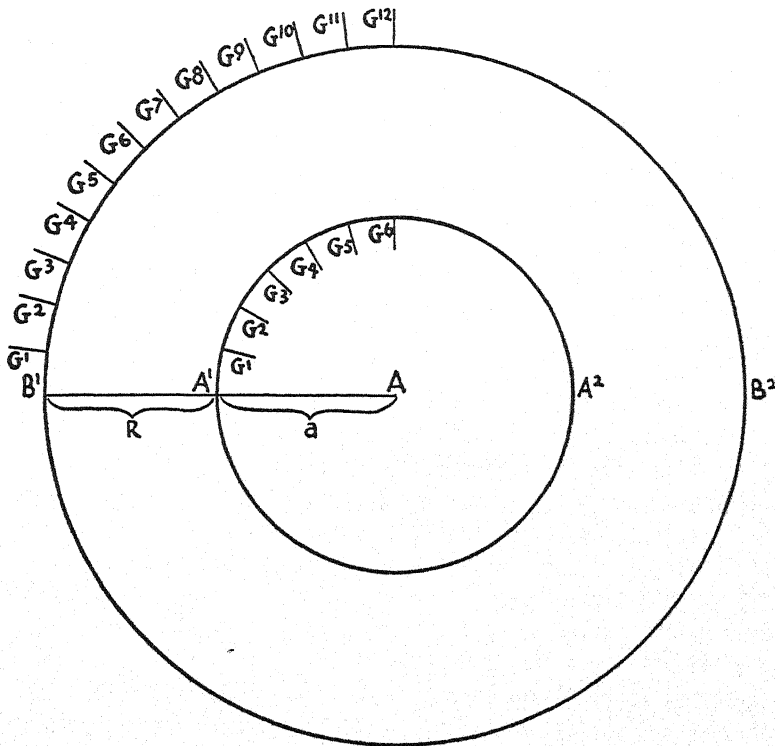
In diagram 1 let the circle with center A and the circumference A_1-A_2 be the defended area. To blockade this area the besiegers must surround it, their lines taking the general form of the larger circle $B-B_1-B_2$. Consequently A's forces are compact while B's are dispersed, and A need move only a short distance in order to strike any point of B's line, while B must move his reserves over a considerably greater distance when reenforcing any threatened point because he must stay outside the arc $B-B_1-B_2$ whereas A can move directly in any direction within the circle A_1-A_2 . B's one means of preventing A's doing so is to press upon A from all sides, which becomes more difficult to do as the size of the circle increases. In the present case the Central Powers were free to hold every sector but one defensively, while concentrating their forces available for offensive action against that one. Moreover their communications were rapid because they went overland by rail, whereas the external communications of the Allies were comparatively slow because they must go overseas.

As to converging fire, its importance increases or decreases according to the relation between the range of missile weapons and the size of the defended area. Again considering the latter as a circle with center A and radius "a," in diagram 2, if the range R be considerable with regard to "a," then the besiegers can put into action many more guns than the defenders. For instance if we make R equal to "a," and if we assume the width of a gun emplacement to be G, then on the sector B_1-B_2 the besiegers can put into action over twice as many guns as the defenders can oppose to them on the corresponding sector A_1-A_2 .

Moreover in diagram 2 a slight increase in range and slight adjustments of the aiming directions of the guns on the concave line B_1-B_2 will permit almost all of them to concentrate

Diagram 2

CONVERGING FIRE



their fire, for instance on G6 in the middle of the convex line A1-A2, while great adjustments in the aiming directions of A's guns will be needed to permit even a few of them to concentrate fire on any one point in B's line.

In the old sieges, with R fairly large as compared with "a," converging fire was a chief tactical advantage in favor of the besieger. Throughout the important middle stage of the operation he could silence the guns of the besieged by a concentrated artillery fire to which they could make no equivalent reply. Should they sally out against him they would be exposed to fire not only in front but on both flanks. Thus, as we saw in the second chapter in connection with Vauban, it was possible to take even strong fortresses with fair rapidity and without undue loss provided that the besieger had sufficient numbers and resources.

On the other hand when R is small compared with "a," then the advantage of converging fire decreases toward a vanishing point; and when R is negligible as compared with "a" so that the two circles practically coincide as in 1914-'18 then the besieger has no general advantage whatever. All his attacks must be frontal, except for local salients which may well be as numerous on one side of the line as on the other. Indeed the advantage of converging fire will be on the defending side if an attack gains ground on a narrow sector; if the assailants fail to penetrate the entire defended zone on a front of more than twice the range of the defending artillery, then they find themselves in a salient exposed to fire from both flanks.

Notwithstanding the above differences, the trench warfare of 1914-'18 conformed on the whole to the conditions of position warfare throughout history.

Those conditions might have been more quickly recognized, especially by the Western Allies, had universal entrenchment been either intended or foreseen. Instead, as we have noted, not the will of either side but the brute force of circumstances had compelled it.

The unexpected trench warfare was still another jest of fortune against the neo-Napoleonic theorists. Besides exalting battle, those theorists had never tired of praising mobility. The considerable part played in Eighteenth Century warfare

by permanent fortresses and entrenched lines, in other words by the defensive behind prepared positions, they had despised. Everything, they had said, would depend upon great battles in the open field, decided very largely by the relative speed at which the armies could move. Now they had had their great battle, and it had decided nothing except the trace of a trench line within which—by an irony even greater than that of the German retreat from the Marne before the threat of a Franco-British advance without waiting for that threat to be made good—they found themselves frozen into an immobility more absolute than that of any Eighteenth Century campaign.

So also the Nineteenth Century theorists had been all for mass strategy and against "cordons," the very broad formations in which Eighteenth Century armies had sometimes sought to cover whole theatres of war,—only to find their armies now condemned to lines more extended than any cordon ever before imagined.

Nevertheless the reasons for trench warfare with its enormously extended fronts were as old as man. Rapid movement soon tires both men and horses. Combined with enormous numbers, it makes supply almost impossible, thus increasing fatigue. Presently—unless one side breaks—there must be a halt, if only for a rest. At the Marne neither side had broken. Once halted in the presence of an enemy, men must shelter themselves against him in order to live. Both sides do so. These shelters or defenses must be dealt with when either side is sufficiently rested and supplied to try to go forward again. The degree of mobility then achieved will depend upon the relative strength of the attack and defense under the existing conditions.

As to the moral effects of position warfare upon armies and upon the populations which support them, that form of war is at once a less and a greater strain than campaigning in the open field.

It is a lesser strain in that the intolerable fatigue of long, forced marches is no longer felt. Such supplies as exist within the defended area can be regularly brought up and distributed to the troops. As long as sufficient numbers are present, a regular system of reliefs can be organized. Even those who

garrison the front lines are more or less sheltered from hostile action.

On the other hand position warfare is in other respects a greater strain than open warfare. In the first place your front line troops are continuously in contact with the enemy. In past wars of movement such contact was comparatively rare; the average soldier fought for a few hours, then marched or camped in safety for weeks on end. On the contrary, men in trenches or siege works, however well sheltered, feel death always close. As far as the range of missiles extends there is continual danger. The immobility of the fighting lines permits heavy weapons and quantities of ammunition to be brought up, so that over a considerable depth there is always some firing going on, by contrast with mobile campaigns in which heavy stuff is limited by carrying capacity and the necessity for speed. The immobility itself is a sort of moral strain: after each relief the soldier sees no new and fresh country but must return to one or another sector in a monotonously desolate and unchanging line. Also trench warfare has its own peculiar physical hardships. Since trenches are ordinarily cut well below the surface of the ground, and since shelters against bombardment—commonly called dugouts—are usually regular caverns, they are difficult to drain. In the moist climate of Western Europe they are often infernos of dampness and mud.

If the strain of position warfare on the armies was partly less and partly greater than that of open warfare, the strain upon the populations which supported them was altogether greater. Mass warfare of any sort demands huge numbers. As long as a bare minimum of food, clothing and shelter can be found for the civilian populations, it is desirable to put every available man under arms. All governments therefore made an intense effort to transform their entire nations into recruiting and supply departments for their colossal armed forces. There seemed no limit to the need for recruits and munitions. Further, sieges have always been expensive affairs demanding quantities of labor and construction material as well as powder and shot. As early as the Seventeenth Century Louis XIV's great engineer Vauban had considered them so serious as to recommend the approval of the Head Of The

State after consultation with his Cabinet Ministers before beginning one. On such a scale as that of 1914-'18 the cost ran to almost meaningless astronomical figures.

The effort could be made and the cost met only by increasing the authority of governments beyond that previously wielded by any tyrant of old. With national patriotism for a motive and the modern ease of communication plus propaganda as instruments, the peoples submitted their lives and wealth to their rulers after a fashion unknown to history. The average Twentieth Century city dweller seems more docile than the free citizen of any known early period. In the first place he has been systematically regimented by what is called popular education. In the second place the habit of newspaper reading has taught him to accept opinions from sources of which he knows nothing. Monopolize his newspapers, as a wartime government can easily do by means of censorship, and you can make him believe practically anything. The simplest way to make the masses do what was wanted was for each government to tell its people that it and they were on the side of the angels, whereas their enemies were monsters of wickedness.

In addition to the almost unlimited taxing power of governments, on the financial side early Twentieth Century conditions were almost ideally suited to an orgy of extravagance. The world possessed more real wealth than ever before. Much of that wealth was highly concentrated; the proletarian millions were accustomed to live close to the conventional level of subsistence. The time also possessed unrivaled means for juggling with values through the use of paper money together with the banking and credit system. These devices permitted governments to mortgage the future almost indefinitely as long as anyone could be found to hand over real wealth in return for a promise of eventual repayment with interest. They also permitted the creation of fictitious values capable of passing for a considerable time as real.

The reader must by no means imagine all this as the work of a day. The rigid censorship of news was clamped down at the very beginning, but the other developments came gradually. Of course no one could tell how long the struggle might go on. By the end of 1914 all that was clear was that it would

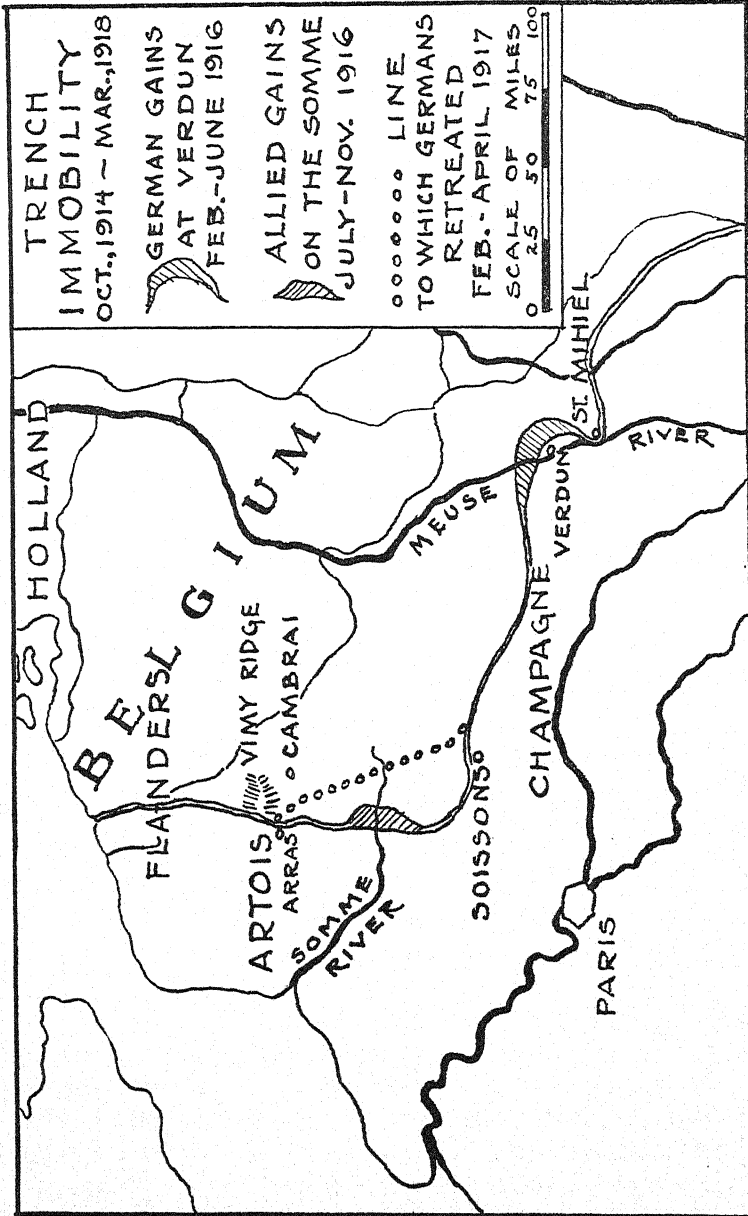
be much longer than had been expected, and also enormously laborious and expensive, all because of the great strength of the modern entrenched defensive.

The essence of that defensive strength was the rifle bullet. We have seen how trenches, which had played so great a part in Eighteenth Century war, had been made far easier to hold when modern industry had transformed the infantry musket into a rifle. In its turn the rifle had become first a breech loader, then a magazine rifle. Bullets could now be fired from machine-guns. These were hardly infantry weapons because of their weight, but once in position and supplied with ammunition a single man could handle one, thus developing fire-power equal to at least fifty infantrymen. Such tiny targets were most difficult for artillery to destroy. To try to hit one was like trying to crush some little insect which can take shelter in any cranny.

In addition to the machine-gun bullet there was barbed wire. Modern industry could spin enormous lengths of metal rope too thick to be easily cut, and studded with artificial thorns more formidable than those of any tropical jungle. An adequate belt of such stuff tangled together was utterly impassable.

Compared with war in the open, the first characteristic of position warfare has always been its relative immobility. In an active and successful siege first the outworks are carried, then the main lines of resistance are one by one breached and entered. In the end either the besieged surrender or the last, inner retrenchments are carried, but all this requires movement so small as hardly to be seen except on a very large scale map.

In the present case, to anticipate events, the combination of machine-guns and wire crushed every offensive on the Western Front so thoroughly that from October 1914 to March 1918 no attack or series of attacks was able to move the front line ten miles in either direction. For over three years the one appreciable movement was the deliberate German retreat early in '17. After the destruction of so much wealth and the loss of so many lives, every attack but one was smothered in mud and blood. Throughout those forty months the one exception



was the attack at Cambrai which, as we shall see, was not pushed.

After immobility the second permanent characteristic of position warfare is that its decisive arm is artillery. This has been so not only throughout the age of gunpowder. If we define artillery work broadly as "the use of weapons each of which requires a team of two or more men to move and fight it," thus including catapults, we find the same thing true ever since the beginning of record, at least since the time of Alexander the Great over two thousand years ago. Strong, prepared defences, adequately manned by garrisons equipped about as well as their assailants, can defy infantry attack even when made with enormously superior numbers. They can be assaulted successfully only after the artillery of the assailants has so mastered that of the defenders as to beat down some considerable part of the works, thus permitting the infantry assailants of the breach, or the sector to be attacked, to fight on reasonably even terms with the infantry defenders. Nor is that all, for the actual assault must always be a frontal attack which is the easiest kind of attack to resist. While the defending side has numbers and strength sufficient to relieve the defenders of the breach when necessary, the defence can usually be made good. In the old sieges the attacking artillery not only dealt with the prepared defences; it was also expected to wear down the garrison, inflicting on them such casualties and such fatigue that they can no longer play their part.

In 1914-'18 the transformation of armies intended for mobile warfare and therefore organized around their infantry to armies intended as position warfare and therefore depending chiefly upon artillery, would in any case have been a long business. The manufacture of modern weapons, especially cannon and their munitionment, is a complex and delicate affair, requiring special materials and tools which are themselves difficult to make. Moreover the situation could not be met by merely multiplying the common type of gun and projectile. That type, the field gun of about three inch calibre firing about an eighteen pound shell, had been developed because of its handiness in mobile warfare. From immemorial time position warfare had demanded powerful rather than mobile weapons.

Further, the usual type of projectile for land warfare was shrapnel which could spatter a wide sheaf or splash of bullets and small fragments; but shrapnel, although effective against troops in the open, is useless against entrenchments. To destroy them you need high explosive shells of more than three inch calibre, preferably six inches at least.

Another need was the ability to lob charges of high explosive over short ranges in order to reach entrenched enemies invulnerable to flat trajectory weapons. As in the past, this was met by providing mortars both large and small and also grenades—again in vast quantities.

In all these matters the Germans had the start. They had believed in heavy field artillery even for the war of movement, and they had provided siege guns and trench weapons for attacking French fortresses. Consequently when the unforeseen needs of general trench warfare arose, they had only to increase their production of existing types. In France and England, on the contrary, the higher authorities did not at once appreciate what was wanted, and when convinced they found it a long business to adapt their considerable industrial resources to the making of unfamiliar weapons.

In finding recruits England was faced with an equally novel task. She had never had conscription, nor had she ever raised a large land force except for a moment during the Boer War. With only the remnant of her professional establishment and her few ill trained militia as a nucleus, she now found herself compelled to improvise a mass army. The greatness of her effort, together with the complete lack of any national precedent for it have perhaps been insufficiently appreciated.

Two assets she had. First her strong national patriotism permitted a considerable beginning to be made by voluntary enlistment. Second the superiority of highly trained to militarily low grade troops is less marked in position warfare than in the open. The chief asset of high grade units is their ability to manoeuvre rapidly and coherently, while in position warfare mere natural courage and determination somewhat compensate for military defects. Hence the inevitable shortcomings of her improvised troops were not as marked as they would have been in mobile campaigning.

Before surveying the melancholy history of trench warfare, the reader must remember the extraordinary novelty of the problem to the generals. The ordinary uncertainties of active command in the field, the friction of the human machine and the constant "fog of war" as regards the enemy, are bad enough. Those who say of generals that they were "stupid as usual" are merely ignorant of their difficulties and too often jealous of their glory. But now those ordinary uncertainties were multiplied many times over by a whole set of mentally unfamiliar conditions. Imagine a lawyer who had spent his life practicing in England or the United States suddenly called upon to try an important case before a French or a native Chinese or Moslem court. Or imagine a physical scientist whose laboratory instruments were replaced over-night by others of a sort strange to him. Only then can one appreciate the quandary of Commanders trained throughout their lives in neo-Napoleonic military theory and then suddenly confronted with the trench stalemate after the Marne. Accustomed as they were to estimating the strength of armies in terms of infantry numbers, it is no wonder that they did not more promptly adapt themselves to unprecedented problems. Although the blame for the many lives uselessly thrown away must indeed be shared by the individuals in authority, most of that blame is due to the theorists who obstinately refused to recognize the logical result of combining enormous numbers with the defensive power of the rifle bullet.

In the words of General Fuller: their "carefully planned war was within a few weeks of its declaration smashed to pieces by fire-power; fire-power so devastating that, as armies could no longer live upon the surface of the battlefield, there was no choice but to go under the surface; consequently trenches five hundred miles long were dug, and armies went to earth like foxes. Then, in order to secure these trenches from surprise attacks, each side turned itself into an immense spider, and spun hundreds of thousands of miles of steel web around its entrenchments. Thus, after a few weeks of *real* warfare, the *offensive à outrance*, that high gospel of the pre-war manuals, was reduced to a wallowing defensive among mud holes and barbed wire. Armies, through their own lack of foresight, were

reduced to the position of human cattle. They browsed behind their fences and occasionally snorted and bellowed at each other."

The tactics of trench warfare are best studied in the methods adopted by the German and French armies, the two most highly organized forces participating in the great struggle.

The German plan for 1915 was to attack the Russians while standing on the defensive against the French and British. To accept trench warfare in the West was to throw away one of their chief assets, the manoeuvrability which their troops owed to superior training. This the German Command realized, but nevertheless they counted on the quality of their troops plus the strength of the modern defensive to permit them to hold against the Western Allies, although with the spring the latter would be superior in numbers in the proportion of about five to four. To strengthen the German front in the West, the technique of field fortification was elaborated, trench weapons, heavy artillery and munitions were provided, and lateral railways were built to speed the movement of reserves.

On their side the Western Allies made their main effort against the German trench lines, delivering a secondary offensive against the Dardanelles to cut off Turkey and open up communications with Russia via the Black Sea.

The idea of attacking the Dardanelles was of doubtful wisdom. Since geography and bad communications prevented any serious Turkish offensive, it was better to leave the Turks alone except for protecting the Suez Canal and making sure of the oil of the Persian Gulf. It was also politically unwise because it raised the question of Constantinople, thus causing friction between the Allies and the Balkan States and also between the English and the Russians. Finally the object, the munitionment of Russia, must have been long postponed even in case of success, since it would be a long time before the Western Allies would have surpluses to dispose of. The execution was inferior even to the conception. The British government and High Command could hardly have done worse; losing all hope of surprise by announcing their intention, then trying to open the straits by naval action alone, finally sending insufficient troops. These errors, together with the inherent

difficulties of overseas expeditions, brought failure. The skill of the Army Commander, Ian Hamilton, could not turn the scale, and the little footholds on the Gallipoli peninsula were finally evacuated before the end of the year.

In the West the French were slow to realize the difficulty of the problem. How, they thought, could sixty million Germans and fifty million Austrians long resist a hundred and fifty million Russians and forty million Frenchmen backed by the sea power, wealth and industrial strength of England? In the hope of ending matters in the spring of '15, no large scale construction program of French heavy artillery was begun. It was thought sufficient to collect the existing heavy cannon from forts and shorn batteries. These numbered less than four hundred, of which only about a hundred were quick firing six inchers, the rest old, slow firers of from four to eleven inch calibre. The British Army in France had only seventy one heavy pieces.

For our purpose the attacks which were the episodes of the monotonous tragedy of trench warfare may be reduced to a formula: first the number of heavy guns, which determined the width of the sector to be attacked, and incidentally the number of attacking infantry. Second the defences and garrison of the sector. Third the timing of the operation, the length of the bombardment and the rhythm of the infantry attacks. Finally the ground gained—if any—and the respective losses. In almost every case the assailant's object was not primarily to wear down the defenders but to break the defensive line, making a breach through which his troops could pour into the open country behind and there resume open warfare. In every case the effort failed.

The French first tried to break through in February '15 in Champagne. For several days, in what was then thought a heavy bombardment, a hundred slow-firing heavy guns pounded two miles of the two or more trench lines composing the single German position. Three Army Corps were in reserve, two others assaulted and advanced a mile and a half; but not far enough to break into the German artillery position, so that the converging fire of the German guns caused heavy losses. On the third day it was decided to relieve these two Corps. The

relief took two days, and thereafter a month's continuance of the attack merely raised the French butcher's bill to nearly a quarter of a million.

It was afterwards learned that only the relief had saved the Germans who had had absolutely no reserves available when it was ordered. Victory had danced unseen but within reach.

At Neuve Chapelle in March the British with forty two battalions attacked a sector consisting only of a single trench line and garrisoned by only two German battalions, carried the position, but lost so heavily that they then hesitated most of the day in the face of a resistance later discovered to have consisted of only five hundred surviving Germans with three machine-guns. After the arrival of German reserves, persistent and violent attacks resulted only in increased British casualties.

In April the Germans violated the laws of war by attacking with poison gas in Flanders, and gained a considerable local success but failed to exploit it for want of reserves. In so doing they strengthened the Allied propaganda, exposed themselves to eventual reprisals from the superior industrial resources of the Allies, and threw away for a trivial advantage the surprise effect of their new weapon.

The French, after losing sixty thousand in April in fruitless attacks against the St. Mihiel salient, attacked again in May at Artois. This time they planned a deep bombardment, to be followed by a deep infantry advance intended to rush the whole German position. After four hours of shelling by about four hundred heavy pieces, five Army Corps assaulted a front of ten miles held by four German divisions. Victory came within sight, for the center Corps went clear through for two and a half miles. The other Corps however accomplished little, and the reserves were too far back to intervene in time. Again German reserves closed the gap, and weeks of persistence only raised the French losses to over a hundred thousand, more than double those of the Germans.

The Allies and especially the French next prepared a still more powerful autumn offensive, while the Germans strengthened themselves by defence in depth. Each position was now composed of two or more trench lines, backed by a second

similar position far enough to the rear to be out of effective artillery range. The French main attack was to be in Champagne supported by subsidiary French and British attacks in Artois. In Champagne nearly nine hundred heavy pieces shelled a front of about five miles for several days. Thirty four French divisions then advanced, taking twelve miles of the German first position with twenty five thousand prisoners and one hundred and fifty guns. The local German Army Command considered a general retreat, but bolder defensive counsels prevailed, and the German second position held firm against costly assaults insufficiently prepared by artillery. In Artois the French attack, although made with an infantry superiority of three to one, was stopped short. The British, attacking at five to one, were halted by the German second position. In six weeks fighting, the French had lost a hundred and ninety thousand and the British sixty thousand as against a German loss of only a hundred and forty thousand, a proportion of over five to three.

While the Western Allies had been hammering vainly on the Germans, the latter had been driving the insufficiently armed Russians before them for more than three hundred miles. The Allies had relied upon Russian man power to crush Germany; their press had called Russia "the steam-roller." Weapon power was now to defeat man power. The Germans, supported by the Austrians, assembled about two hundred and fifty quick-firing heavy pieces for an attack in Austrian Poland. The Russians had three successive positions, aggregating six or seven trench lines, but had almost no artillery ammunition left and were even short of rifles. Accordingly, although the frontage of the attack was only ten miles, no effective reply could be made to the assailants' fire. After a heavy bombardment of twenty four hours, the Germans took the three Russian positions on three successive days. On the fifth day the ten mile breach had widened to nearly ninety miles, on the seventh to a hundred and twenty five miles. The colossal Russian losses will never be accurately known; fifty thousand prisoners were taken early in the operation, which was repeated over and over again for five months; the defenders always unable to strike back for want of fire-power, until practically

all Austrian Poland had been recovered and all Russian Poland had been overrun. The Russian armies had been so pounded that the whole political and social structure of Russia was weakened.

In August Italy declared war on Austria but the difficult geography of the new front promptly stabilized operations there, and in the autumn Bulgaria joined the Central Powers in overrunning Serbia.

Thus 1915, except for the entry of Italy, was a year of uninterrupted defeats for the Allies. On the other hand their numerical superiority was even greater than before, thanks to Italy. Also the potential of their industries, including those of the United States upon which their wealth and sea power permitted them to draw, was far greater than that of the Central Powers. America, although protesting against the unprecedented strictness of the Allied blockade, was more complacent toward it than to the counter-blockade which Germany had tried to carry on by means of submarines. These last were not able to operate effectively and at the same time to observe the accepted rule of war, i.e. that no merchantman should be sunk without warning, and if she neither fought nor fled she must not be sunk without previously putting the passengers and crew in safety. On the other hand the Allied attempt to starve out the entire populations of the Central Powers by blockade was both rigorous and cruel. When the Allies armed their merchant ships, still another international question was raised: was America to treat these ships as peaceable cargo-carriers or as warships? If so they could not have taken on cargoes in American ports, but must have left those ports immediately after receiving fuel and supplies enough to reach the nearest friendly harbor. Although the United States determined the case of the armed merchantmen in favor of the Allies and that of the submarines against the Germans, nevertheless the Germans restricted the activity of the submarines by a promise not to sink without warning liners on which Americans might be passengers.

French, Germans and British now alike recognized the preponderance of artillery in trench warfare and the corresponding need for defence in depth. The French Command, having

permanently lost three hundred and fifty thousand men killed and wounded in 1915, fifty thousand more than in '14, now—at long last—laid it down that “infantry has no power of taking obstacles.” As to surprise however the Germans and the western Allies differed. The latter thought the vast preliminary preparations impossible to conceal, while the Germans, encouraged by their Russian experience, hoped for surprise through short but violent bombardments. Both planned to act by successive attacks, one against each hostile position. If these could follow each other rapidly enough, open country might at last be reached.

In the west the Germans decided to forestall their opponents by attacking first. Around the historic fortress of Verdun the French front curved in a bulge of nearly three quarters of a circle with the river Meuse cutting across the bulge, and the French communications in the area were bad. The Germans sought not to break through but to inflict losses by an enormous volume of converging artillery fire. Surprise was attempted by limiting the bombardment to about nine hours and by bombarding a front of fifteen miles of which less than a third was to be assaulted. Two thousand guns, including many quick-firing heavy pieces, were assembled. The infantry were to be cautious and methodical, subordinating themselves to the artillery.

At first the Germans were entirely successful. The hurricane of steel and high explosive tore up the whole surface of the ground, pitting it with shell-craters until it looked like the nightmare country of some dead planet. On the fourth day only their own methodical plan held back the assailants, for over a considerable sector there were practically no French troops, so that Verdun could have been entered with hardly a shot fired. As the French reserves arrived they lost heavily because their Command, for reasons of prestige, persisted in costly counter-attacks instead of economizing men and straightening the salient by withdrawing.

Through the spring and early summer the salient flattened, more French heavy guns arrived, and the Germans began to push forward more obstinately than the new situation was worth; so that the balance of casualties, although still heavily

against the French, was not as much so as at first. Early in the summer, when the German attacks finally ceased because of the need for troops to oppose the Allies on the Somme, Verdun had cost the French four hundred and sixty thousand killed and wounded, and the Germans less than two hundred and eighty thousand. On the other hand, skillful Allied propaganda had convinced the world that the Germans had lost more heavily.

The Somme attack, weakened by the drain of French reinforcements to Verdun, began on July 1. Its front was about twenty five miles, three fifths of it British. The latter had about five hundred heavy guns and nineteen divisions, the French between seven and nine hundred heavy pieces and twelve divisions. The Germans had only thirteen divisions in line, but their positions were immensely strong and the four day bombardment prevented surprise.

On the first day the British alone lost sixty thousand dead and wounded; the deep German dugouts had withstood the heavy shelling, and the defenders had been able to get their machine-guns up in time. By this time, however, Allied man power and munitions were formidable. By January 1916 the British, having introduced conscription, had had thirty eight divisions in France aggregating a million men, with another half million to follow by mid-summer. Through the summer and fall, attack followed attack on the Somme, slowly pounding and dragging forward over the tortured earth, gaining only fragments of ground at heavy cost, but inflicting losses which the Germans could ill afford.

On the Eastern Front the Russians, having increased their domestic production of munitions to two thirds that of France and having also received large consignments from their Allies and from America, were now better armed. Nor had the appalling losses of the previous year wholly destroyed the military value of their troops. They were still able to beat the Austrians; in an offensive they took nearly half a million Austrian prisoners. Against the Germans however their attacks failed badly, and their losses for 1916 were over a million. It remained to be seen how much longer Russia could stand such punishment.

The Austro-Italian front had seen heavy but indecisive fighting, somewhat favoring the Italians.

On the Somme in the autumn the British for the first time used a new weapon, the tank, destined to go far toward breaking the trench deadlock. This was an armored fighting vehicle or self propelled gun mount, running on caterpillar tractors and therefore having a considerable power of crossing obstacles. It was a difficult target for artillery because of its mobility, while to rifle and machine-gun fire it was invulnerable. Also it could break down wire entanglements. As with the German use of gas, its first surprise effect was largely thrown away for the sake of a local success; nevertheless its possibilities were obvious.

As to the other new weapons, both sides were now freely using gas and had provided their troops with gas masks. The aeroplane, in addition to its value for reconnaissance and for the adjustment of artillery fire, was also being used for bombing raids against cities. Although the actual damage done was trivial compared to the effort made, these raids had great moral effect upon the city populations. Consequently they had a diversionary value, for considerable forces of anti-aircraft artillery and defending aircraft were held back in order to deal with them. Planes also developed a certain power of attack against ground troops, both by bombing and machine-gunning.

For the moment however not the new weapons but the hideously increasing losses were the chief factor in the war. On the Western Front alone, by November 1916 the French had permanently lost over nine hundred thousand, the British about half that number, and the Germans well over eight hundred thousand—about six to every ten lost by the Western Allies. The exhaustion of German man power, now a chief Allied objective, seemed approaching, but at what a cost!

Obviously the number of men lost to the enemy was for both sides a matter not of knowledge but of estimate, and—unfortunately for the Allies—the French and British Intelligence Departments agreed in exaggerating the shortage of German man power. This shortage was very real; Ludendorff, nominally the first assistant of Hindenburg the new German Commander-in-Chief but really the German directing mind,

afterwards wrote of the last phase of the Somme: "... we were constantly on the edge of a catastrophe." Nevertheless when Roumania entered the war in the late summer the Central Powers were just able to scrape together a sufficient force to defeat her and to occupy most of her territory. Thus opinion in the Allied countries, disappointed in its expectation of a German collapse, swung around to believing the Central Powers stronger than they really were.

Everywhere the strain of two and a half years of war, and the disappointment of so many hopes, was beginning to tell. Henceforward fatigue was to interfere more and more with the calculation of statesmen and generals.

On both sides the decisions taken in '17 reflect the general weariness of the war. In Germany Ludendorff and the Higher Command first advised proposals for peace which the Allies rejected, then—despairing of a decision on land—approved of a return to unrestricted submarine warfare. The risk of an American declaration of war was deliberately run, on the ground that America had practically no army and would be unable because of the submarine blockade to ship to France any improvised troops she might raise. Further, should these improvised formations reach the Western Front, their fighting value would be small. Meanwhile the Germans planned to withdraw from the tip of their great salient in France, thus shortening their line and economizing troops.

The French also were feeling the strain, and their difficulties were increased by the longing of their politicians to resume their favorite game of faction fights and petty personal manoeuvres. Strong pro-German political influences were at work. The Army Committee of the French Parliament said that for political, economic and moral reasons the war "... could not and should not be prolonged beyond the summer of '17." Joffre was replaced by Nivelle who had during the latter part of '16 distinguished himself in regaining important parts of the ground previously lost to the Germans at Verdun, the new Commander-in-Chief being chosen because he promised a quick decision in the coming year.

Unfortunately both the Army Committee and Nivelle—like the Army Regulations of 1913—were looking more to the de-

sirable end of shortening the war than to the means for making that desirable end possible.

Nivelle's hope was based upon the numerical superiority of the Allies who now outnumbered the Germans on the Western Front by thirty divisions, supported by increasingly superior materiel. Instead of a single abrupt attack as in '15, or repeated attacks on the same front as in '16, he planned multiple attacks in different sectors in order to exhaust the German reserves. As a conception this marked a distinct advance, for it resurrected the idea of manoeuvre as opposed to that of mere pounding. Its author, however, grossly exaggerated the speed at which the enemy could be worn down, and in the event his chances were gravely reduced by two new factors: the voluntary retreat by the Germans from the tip of their salient and the Russian Revolution.

These events coincided closely in time with a third which was destined to be decisive, America's declaration of war upon Germany, but for the moment the German withdrawal and the Russian Revolution dominated the scene.

This is not the place to analyze either the Russian Revolution or the chances which determined—sometimes by very narrow margins—its various phases. Suffice it to dwell for a moment upon the fearful punishment which less than three years of mass warfare had inflicted upon that unhappy country. Out of a population of a hundred and fifty million, from first to last about twelve million had been mobilized. Fighting constantly against troops better armed than themselves, and in the case of the Germans better organized and commanded as well, the losses of these twelve million had been greater than any previously suffered on the planet. The lowest figure given for their known dead is nearly one and three quarter million; another careful estimate gives over two and three quarter million. Adding those who are presumed to have died gives over four million. Perhaps another two and a half million were prisoners or missing, and still another million had been seriously wounded. When in mid-March '17 the Czar abdicated and a Republic was set up, naturally the driving force of Russian events was the determination of the masses to stop fighting.

From the beginning the Germans fully understood the immediate significance of the Russian collapse. By mid-April seventeen of their best divisions which had been on the Russian front had been transferred to the West.

The German withdrawal, although disadvantageous in point of prestige, greatly increased real German strength in the West through shortening the German line by twenty miles. The new front, freely chosen by the German Command, was strong both by nature and by the elaborate works known as the Hindenburg Line. The new German defensive system relied less upon continuous trenches than upon little concrete redoubts called pill-boxes, each shaped like a blunt T with the crossbar toward the enemy, and so small as to make them difficult artillery targets. Moreover they were carefully concealed by what was known as camouflage. Their construction was solid, the top of their T had no openings whatsoever and their machine-guns operated toward their flanks from loopholes on either side of the upright of the T and sheltered behind the projecting concrete crossbar. Finally the Germans in their retreat systematically devastated the evacuated area, destroying all communications and shelter. Thus the Allies, in order to attack between Arras and Soissons would not only have to cross a devastated belt averaging more than ten miles in depth, they would also have behind them the nightmare country of the Somme with its whole surface torn up by months of intense bombardment. The front of the impending attack was narrowed by the difficulty of crossing this devastated zone, and the Allies were compelled to strike their real blows only against the German lines on either side of it.

What with the Russian Revolution and the shortening of the front by the withdrawal, the Germans were able to build up a reserve of forty four divisions in the West, two and a half times of what they had had in hand at the beginning of the Somme.

As if this were not enough, an order giving many details of the French plan fell into German hands, destroying the last chance of surprise.

After the German withdrawal a commander possessing liberty of action might well have paused to prepare a new scheme.

Nivelle, doubtless feeling himself the prisoner of the hopes he had encouraged, and perhaps over confident in the new Allied masses of guns and shells, persisted in what circumstances had left of his original plan. The Allied offensive of April 1917 wholly failed to break the German front. The British indeed took Vimy Ridge at a cost of losses not much greater than those inflicted on the defenders; eighty four thousand to about seventy five thousand. Nor were the French casualties disproportionate to the standards of this gigantic war, and by May all of the original forty four German reserve divisions had been engaged. This time however the French no longer had the will to go on pounding. The contrast between Nivelle's promises and his accomplishments was such that he was relieved from command. The offensive was stopped and serious mutinies broke out in the French army.

The French mutinies of '17 are still little known; practically nothing yet has been published about them. They were at least serious enough to reduce French offensive operations for the remainder of the year to a few attacks made with limited objectives, in which practically all the work was done by the artillery. Moreover the French strongly urged the British to go on attacking in order to prevent German attacks against the French themselves.

The objective of the main British summer and autumn offensive during 1917 was affected by the German submarine campaign to which I now turn. That campaign at first came near achieving decisive success, reaching its peak in April. In the first quarter of the year nearly two and a quarter million tons of Allied shipping were sunk. In April one out of every four ships leaving England was lost, but thereafter the situation improved. American light war craft helped to combat the raiders, and the Allies wisely enforced the convoy system, permitting merchantmen to sail only in groups under naval escort. Nevertheless in the early summer the German submarines were still the gravest sort of menace.

The British, finding themselves forced to go on attacking in order to keep the Germans off the French, decided to strike near the Belgian coast where any considerable penetration would threaten the German grip on the Belgian ports which were be-

ing used as submarine bases. On the other hand this area was low, reclaimed marsh land of which the intricate draining system had already suffered severely from three years of shelling. The new deluge of steel and high explosive now turned it into a hopeless bog which was made worse by an exceptionally rainy summer. None the less the British unwisely persevered from June into December, losing about three hundred thousand dead and wounded without threatening the Belgian ports.

While the French pulled themselves together and the British floundered in the Flanders mud, the Germans invented a new offensive tactic. No previous attack in trench warfare had been able to combine surprise, method, and continuity of progress. The Germans now planned to begin by insuring secrecy in the approach march. Both the attacking artillery and infantry were to move into position at the last moment, making all marches by night, taking elaborate precautions to prevent noise, and sheltering themselves from view in woods and villages during the day. To complete the surprise, the bombardment, although intense, was to be short—not much over four hours, and without preliminary fire for adjustment. It was to concern itself more with the personnel than with the materiel of the defence, and was at first to consist chiefly of shells filled with temporary gases intended to paralyze the infantry and gunners of the defence and then to evaporate, leaving the way clear for the German infantry. Just before the assault, high explosives were to accomplish the necessary destruction, especially against the wire. To deal with defending machine-guns the assaulting infantry was to have little, mobile trench mortars and accompanying guns. Progress was to be by "infiltration," that is each unit was to go ahead as far and fast as it could, careless of its flanks for which the Higher Command was responsible. The reserves were to follow whichever front line units advanced fastest and were then to spread out, lapping around and submerging the remaining islands of resistance somewhat as water does after breaking through a hole in a dike.

In the fall of '17 the Russians, who had in the early summer wasted too many of their remaining patriotic troops in a last

futile offensive, were the first to feel the novel German method. At Riga their front was easily broken, and before the end of the year Russia, now deep in Bolshevik anarchy, had signed a separate peace which left the Central Powers in effective control of the rich territories of the Ukraine.

Italy was the next victim of the new tactic. At Caporetto a spearhead of six German and nine Austrian divisions broke the Italian front. Thirty thousand Italians were killed or wounded, and over a quarter of a million were captured together with over three thousand guns—nearly half of the entire Italian artillery. Notwithstanding such a smash, a stand was made some eighty miles back of the original line, and the front was again stabilized; the momentum of the attack and especially the forward movement of artillery and munitions could not be maintained. Nevertheless, for the third year in succession the Central Powers had ended the campaigning season with a notable success.

On the other hand, late in November, while the Flanders fighting was still dragging towards its end, a brief but brilliant success gained by British tanks in front of Cambrai showed a means of escape from the immobility of trench warfare even more promising than that found by the Germans. The latter after all, still depended upon artillery, while the tank needed no preliminary bombardment whatsoever. As an instrument for achieving surprise it was almost ideal. Hitherto its power of combining tactical with strategic surprise had not been used, and its usefulness had been frittered away in dribbles—often in deep mud to which it was not suited. Now it was given a chance to show what it could do.

Favored by a morning mist, between three and four hundred tanks, without a preliminary shot fired, broke lanes through the German wire and rolled victoriously over the German trenches, the infantry following almost without casualties. Rifle and machine gun bullets rattled harmlessly off the tanks' armor, and even from artillery their losses were slight. Most of the defenders, terrified by the sudden onset of such monsters, either fled or surrendered. In a day the whole German first position was carried on a front of ten miles. Had adequate reserves been present the entire Western Front might have

gone. There were, however, no reserves. The local British Army Commander, deprived of the mass of men wallowing in the Flanders mud, had attempted an operation too extensive for his resources. Consequently the attacking troops tired, and vigorous German counter-attacks wiped out most of the gains, so that the first rejoicing among the Allies turned to gloom. At the same time the tank had shown immense power, full of possibilities for the future.

Disappointed in the hope of crushing Italy, the Germans under Ludendorff now planned to end the war by attacking in '18 on the Western Front. In the east and southeast they now had not much more than a million men, in the west over three and a half million. Although the peace imposed upon Russia and Roumania left the Central Powers in possession of much ordinarily rich territory, that territory had suffered so much that few supplies could be drawn from it. Hence the grip of the blockade had not been broken. As time went on, the Americans would bring their power to bear. Accordingly the Germans must hurry. Toward the end of March 1918 their rifle strength in the west was over a million and a half, that of the Allies only a little over a million and a quarter.

On March 21st the Germans struck their first blow against the British right, hoping to separate the French and British armies. This done, the latter might be forced back upon the sea.

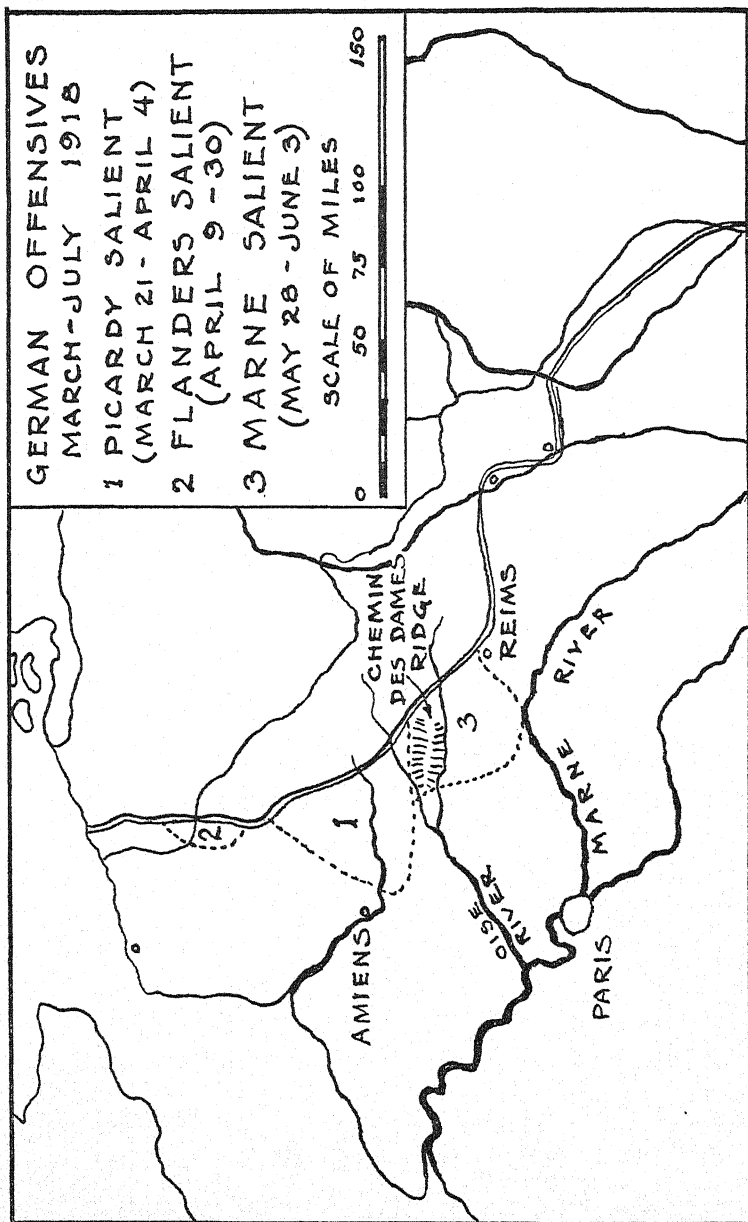
Thanks to another mist like that at Cambrai, the attack began with a brilliant success. The British line was broken on a front of nearly sixty miles. For a week the Germans advanced at a rate of over five miles a day, so that no one knew how far their rush might carry them. At Vimy Ridge in front of Arras the British front held, and on the southern flank of the salient the French kept throwing in reserve divisions, but the threat of separation between the two Allied armies was so grave that Haig, the British Commander-in-Chief, now urged an inter-Allied command under a French general, which the British had always hitherto refused. The man chosen was Foch.

As the attackers advanced, however, their difficulties increased. At best, supplies, artillery and munitions could hardly

have kept pace with so mobile a front. Moreover everything must now pass over the area devastated by the Germans themselves the year before, not to speak of the battlefield of the Somme. Thus Foch, vehemently determined to prevent a separation between the two Allied armies, found his task made easier by a slackening of the German rush like that which had followed Caporetto. Once the front stabilized again, the defense hardened as usual. After a fortnight's fighting the Germans turned their efforts elsewhere.

For the moment the impression was one of German victory. For the first time since the beginning of trench warfare, a huge sector of the Western Front—sixty miles—had been smashed, and a forty mile advance made. The British had lost ninety thousand prisoners and sixty thousand dead or wounded. All their reserves and nearly half of the French army had been engaged against ninety two out of the two hundred and seven German divisions in the west. From the tip of the new salient the important road and rail junction of Amiens was now under German fire. On the other hand the Allied front had reformed. The British had neither been separated from the French nor driven into the sea. Amiens had held. Behind the new lightly fortified front the German communications were hampered by the devastated areas. Most important of all, the Allies now had a united command.

On April 9, within a few days after their last attacks in front of Amiens, the Germans began a new offensive in Flanders. Aided by still another mist and by the misconduct of some Portuguese troops, they scored another brilliant initial success. Within forty eight hours another twenty miles of the British front had gone. Although Ludendorff had intended the stroke as a diversion, he now tried to exploit so unexpectedly sweeping a victory. Again everything seemed to hang in the balance as the assailants rushed forward, this time for some ten miles; but again they were unable to keep up the pressure, and the front was reformed with the help of French reserves. By the end of April Ludendorff's forces stood in a second lightly fortified salient with the old shell-torn front in its rear. While the total British losses had now reached nearly a third of a million, the Germans had now engaged a hundred and thirty



of their two hundred and seven divisions. Of this hundred and thirty, thirty one had attacked twice.

Now followed a four weeks pause while Allied sea power worked its hardest at bringing American troops. Over a quarter of a million reached France in March, nearly a third of a million in April, over four hundred thousand in May. They were of course ill trained, but they had assets of youth, freshness and enthusiasm which had long since been pounded out of all European armies. Moreover the little American Regular Army included a considerable proportion of officers whose military education compared favorably with any in the world—a vital factor for which perhaps the Germans had not sufficiently allowed. If the Allies could hold out a little longer, then Foch must presently gain the initiative.

On May 27 the Germans attacked again. This time Ludendorff, knowing in a general way the large proportion of the Allied reserves now in line between Amiens and the North Sea, had planned a diversion a little further to the east at the Chemin des Dames. Notwithstanding the difficult terrain, the new German tactics broke the front as at Riga, at Caporetto, in Picardy and in Flanders. As in the last three instances, there was a mist. The fifty mile breach and the rapid advance again persuaded Ludendorff—as in Flanders—to turn his diversion into a major attack. Within a week the Germans had taken sixty five thousand prisoners and advanced about thirty five miles. After nearly four years of war they were again on the Marne and marching towards Paris.

For the third time, however, their success was presently limited in much the same way. On either side of the broken sector the "shoulders" of the defense held out. Once more the force of the attack could not be maintained. The intact communications of the defenders permitted them to bring up reserves—this time partly American—and reform their front. For the third time the Germans found themselves held in a lightly fortified salient with their communications hampered by the difficult country of the old front.

The critical point was now that of total reserves. Except for inexperienced Americans, Foch now had almost nothing in hand.

As the Germans had struck in Flanders shortly after being

stopped in Picardy, so they struck again on June 9 almost immediately after being stopped on the Marne. The nineteen divisions of this fourth offensive were aimed southwest down the valley of the Oise between the Picardy and the Marne salients toward Paris. Although there was no attempt at surprise, a gain of five miles was made in the center on the first day. On the third day, however, Foch launched a counter-attack with over a hundred and fifty tanks and four French divisions—the last fresh troops he had. As at Cambrai the previous autumn, the surprise was complete. The Germans were halted.

Now followed another pause while the rising tide of American reinforcements carried the Allied total numbers first to equality with the enemy, then to superiority over him. By July 1 the German rifle strength was down to about a million four hundred thousand and was still falling, while the Allied riflemen now numbered well over a million and a half and continued to increase.

Moreover German morale was beginning to suffer from the long postponement of the promised victory. On June 21 the Imperial Chancellor said: "The war can no longer be decided on the battlefield."

Nevertheless Ludendorff decided to attack again. Although the German infantry companies now averaged only eighty men instead of one hundred and twenty as on March 21, he still had his two hundred and seven divisional organizations, eighty one of them in reserve, of which forty were wholly reconstituted. He would strike on a fifty mile front centering about Reims, thus drawing Foch's reserves down from the north. This accomplished, a final attack against the British in Flanders would gain victory.

At this point the weakness of the much advertised German Intelligence Service is plain. American soldiers were coming at the rate of nearly three hundred thousand a month, nearly a million were already in France, and the Germans had had several sharp tastes of their quality. Either Ludendorff's agents sent no adequate reports or else he did not believe the reports he received, for his attack near Reims, even if successful, could neither win the war nor greatly affect its course.

It could threaten neither Paris nor the Channel ports nor the junction between the French and British. Had he understood the numerical position he would have realized that this offensive would probably be his last. Had he then decided to attack, he would have moved either toward Paris or the Channel ports or against the junction between the British and French. On the other hand, he might well have retreated from his lightly fortified salients in the hope of tiring out the Allies behind his strong defensive lines. To stand defensively in those salients was to invite disaster.

On July 15 Ludendorff, gravely in error as to the Allied strength, launched his fifth offensive with seventy six divisions on a fifty mile front centering on Reims. The main attack, east of the town, was stopped dead on the French main line of resistance. There was no surprise, and the strong French artillery hit the Germans hard in their assembly positions. Further, Gouraud, the local French Army Commander, used for the first time a new defensive tactic which neutralized the new German method of attack. To a depth of over a mile he held his advanced zone only with machine-gun detachments whose mission was to delay and dislocate the German advance, keeping the mass of his forces well back out of the bombarded zone and ready for counter-attack. His success was complete. Southwest of Reims the secondary German attack was making some progress, but slowly and painfully, when on the fourth day the west side of the Marne salient was struck by an Allied counter-attack which ended the second or siege phase of the war and began its third and last phase, the collapse of the siege lines and the surrender of the besieged on the brink of disaster.

* * * *

This last phase of just under four months from July 18 to November 11, 1918, has three characteristics: sea power, tanks and the strategy of Foch.

Sea power made victory possible. As we have seen, the German defeat of Russia had come too late to relieve the pressure of the Allied blockade. Although the besieged Central Powers had indeed broken the siege ring, they had done so only to enter a wilderness. Their eastern conquests had gained

them territories so disorganized and exhausted as to be useless for purposes of supply. Moreover the entry of America, the last great neutral, had made it possible for the Allies to tighten the blockade's strangling grip. By 1918 many if not most German civilians were under-nourished, and the knowledge of their sufferings was beginning to discourage the soldiers, themselves on short commons compared with the Allies.

Conversely, sea power was pouring American troops into France. By mid-July there were nearly a million, before mid-November there were to be nearly two million—all strong, vigorous young men full of fight. Thanks to these reinforcements, by mid-July the Allied rifle strength was over a million six hundred thousand and was still rising, while that of the Germans was two hundred thousand less and must continue to fall.

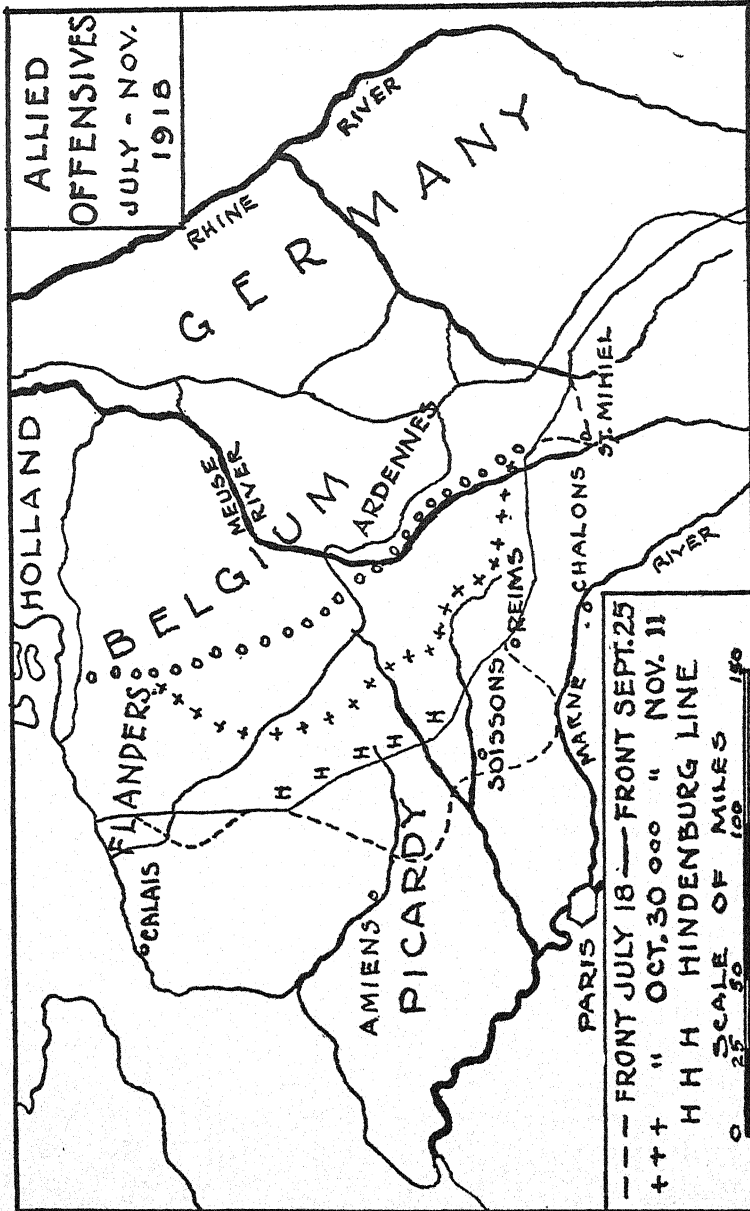
In addition to sea power there were the tanks, through which the Allies could launch surprise attacks without preliminary bombardment. Against them only artillery, firing pointblank, was effective, infantry weapons were a little better than pea shooters. Even artillery did not have matters all its own way, for the tanks were moving targets which spat bullets as they came. At close quarters they crushed men more thoroughly than any elephant. The veteran General Von Zwehl who ended the war as German Lieutenant-Governor in Belgium, said "It was not General Foch who beat us but General Tank." Former German soldiers like the novelist Remarque tell the same story.

Finally the numerically and materially superior Allies were directed by a Chief whose strategy was superior to Ludendorff's. Neither Foch's share of responsibility for the neo-Napoleonic follies of 1914, nor his 1918 indebtedness to sea power and to tanks should blind us to his skill in the concluding campaign. Where Ludendorff had pushed every successful offensive until the bad communications of his new salients, together with the arrival of Allied reserves, had halted him, Foch had noticed that throughout the trench warfare any offensive, if successful at all, was so chiefly in its first stage. When the defending reserves had arrived, persistence in attacking only increased the assailants' losses. Consequently the new Allied Commander-

in-Chief thrust now here, now there, wearing down the German strength with each blow but forbearing to push on—save for the necessary exception of the Meuse-Argonne fighting—after resistance had stiffened. Ludendorff's method has been compared to the swing of a heavy club, Foch's to the repeated thrust of a rapier.

Foch's first prolonged counter-attack, that begun on July 18 west of Soissons, had for its spearhead the First and Second American divisions with the French Moroccan division between them. Since an American division was then over twice the strength of a French division, the original stroke was four fifths American. There was no preliminary bombardment, the attack being led by nearly five hundred French tanks. The brilliant success of this first thrust was presently broadened by a second French attack on its right. After three days Ludendorff decided to withdraw from the Marne salient. He was able to do so without disaster, but the necessary delaying action to save the German stores accumulated there cost him over six hundred guns and thirty thousand prisoners—nearly seven thousand of them captured by the two American divisions in the first four days. For the moment the front stabilized on August 2.

Having removed the menace to Paris and cleared the Paris-Chalons railway, Foch next sought to clear the Paris-Calais railway by disengaging Amiens. To this end on August 8 within a week after stabilization between Reims and Soissons, a British attack struck the tip of the Picardy salient formed by the March German drive. Eleven British divisions, preceded by about four hundred and fifty tanks and powerfully supported by artillery, attacked; again without preliminary bombardment. For the second time the German front gave way. If the number of prisoners—thirteen thousand—was less than in the reduction of the Marne salient, on the other hand the first signs of approaching collapse appeared in the German army. German reenforcements marching up were abused by their retreating comrades with the cry "You are prolonging the war, you scabs!" Or, as an Englishman would say, "You blacklegs!" If Ludendorff, having urged the unrestricted submarine warfare which had brought America in, afterwards



exaggerated the effect of August 8 in comparison with July 18, nevertheless August 8 achieved a second long step toward final victory.

This operation saw the slight beginning of a novel tactical method based upon one of the new weapons, in this case the armored car. Hitherto all attacks—at great cost to themselves—had confined themselves to pounding directly at the hostile troops in front of them, attempting the military destruction of their enemy, that is his demoralization, only by the expensive method of physical destruction. Obviously it would be cheaper to confuse his brain if one could strike directly at his Command. Armored cars with their high speed compared to that of the slow tanks of 1918, offered a partial solution. On August 8 a number of them were sent racing through the first practicable gaps opened in the German front to spread confusion along the roads behind that front. One car had the luck to attack a German Corps Staff at breakfast in Proyart over five miles behind the original line.

Through August and most of September repeated French and British attacks on either side of the Amiens sector gave the Germans no rest, until on September 25 the Allies were again facing the Hindenburg line. Meanwhile the Germans had also evacuated the Flanders salient resulting from their April attack, so that from Soissons to Ypres the front now corresponded closely to that of the spring of '17.

Before mid-September, while the British right and the French left were pushing the Germans back to the Hindenburg line, the Americans took the St. Mihiel salient. This was no great feat of arms, for the strong local defenses were thinly held by troops who were already preparing to withdraw. Nevertheless it was a creditable performance, demonstrating once more the dash of the American soldier, and taking fifteen thousand prisoners and four hundred and fifty guns at a cost of only seven thousand casualties.

So far the Allied offensives had been considered only as preliminaries to a final advance in 1919, but now it began to seem possible to win before winter. To this end, in the last week of September Foch ordered three moves: an American offensive northward between the Meuse and the wooded hills of the

Argonne toward the German transverse railway running northwest and southeast in front of the Ardennes, a Franco-British stroke against the German center now on the Hindenburg line, and an advance of the extreme Allied left by a mixed force under the King of the Belgians.

The Germans were now weakening. On July 15 they still had two hundred and seven divisions of which eighty one were in reserve, and forty three fresh. By September 25 ten divisions had been broken up, and of the remaining hundred and ninety seven only sixty seven were in reserve and only twenty one were fresh. Both the Command and the German people were beginning to see defeat approaching.

Over the difficult country of the Argonne the Americans fought slowly but stubbornly forward toward the vital transverse railway against strong German resistance. The movements of so large and hastily improvised an army—from two hundred thousand in April 1917, American land forces had been expanded by October 1 to a total of nearly three and a half million of whom nearly two million were now in France—were sometimes clumsy, necessitating frequent pauses to clear up serious traffic congestion behind the front. Nevertheless the defenders were forced back.

In the last week of September the British, together with certain American contingents, broke the Hindenburg line; the Flanders attack swept over thinly held German positions to a depth of about forty miles; the Americans advanced for about six miles between the Meuse and the Argonne; and the smallest of the Central Powers, Bulgaria, surrendered practically without conditions. The Bulgarians had been in arms almost continuously since the Balkan War of 1912. Since 1915 they had faced an Allied army based upon Salonika, and when that army broke their front they were unwilling to go on.

In the first week of October the German government asked for an armistice, thus breaking what was left of the national will to continue fighting, and the British reached open country east of the last defenses of the Hindenburg line.

The final phase of the collapse lasted a little over a month. Through the rest of October the Germans, still fighting stubbornly between the Meuse and the Argonne, rapidly withdrew

their center and right. On the 31st the Turks, heavily defeated in the previous year and now beaten again, surrendered like the Bulgarians. On November 4 the Austrians, who in June had unsuccessfully attacked the Italians, and were now fleeing before the latter, surrendered unconditionally. Their final rout, as well as the destruction of the Turkish army in Palestine, was marked by still another tactical novelty: in both cases the final demoralization of the discouraged and retreating troops was due to bombing and machine-gun attacks from airplanes.

The defeat of the Austrian armies achieved not only the collapse of the Austrian state but also its destruction. The enfeebled Hapsburg Empire, morally unsustained by any unifying national patriotism, fell to pieces as Czechs and South Slavs asserted their independence.

The collapse of the far tougher structure of Prussianized Germany, although in the event it did not go so far, was in itself of an even more threatening sort. The nationalism of the revolting Austrian provinces at least represented a cohesive principle within each province, while the German insurrections sprang from mere war-weariness on the part of the rank and file, as in Russia during the early stages of the revolution which led to Communism there.

The German internal collapse went hand in hand with a cascade toward final disaster on the front. By October 30 the sixty seven divisions in reserve on September 25 had shrunk to twenty, of which only ten were fresh. By November 11, the German right having now been pushed back from the North Sea, the breaking up of diminished German divisions had left only a hundred and eighty four divisional organizations between Switzerland and Holland, of which only seventeen were in reserve and only two were fresh. By November 11 nearly four hundred thousand Germans and over six thousand five hundred guns had been captured on the Western Front. By this last date the German rifle strength was not much more than eight hundred and fifty thousand, the Allied still not much under a million and a half. Moreover Italian armies were preparing to cross the Austrian Tyrol to strike the almost un-

defended frontier of Bavaria. The German army and people gave way together.

The mutinies in the German army did not take place at or near the front. It was the troops in the rear areas and on the line of communications who here and there refused obedience to their officers, in some cases fighting against them and against such units as remained loyal.

Finally the German revolution was directly stimulated by the diplomacy of President Wilson who when asked for an armistice said that the United States would negotiate with "veritable representatives of the German people" but must demand mere surrender if "the military masters and the monarchical autocrats of Germany" remained in power.

The Kaiser, the Crown Prince, and Ludendorff who had been for over two years the virtual commanders of the German armies, fled to neutral Holland.


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The wheel had come full circle. In 1814 the Prussian Royal House had systematized the armed horde. For over a century, in the absence of any long war, they had successfully wielded this ponderous instrument which had been the logical product of revolutionary democracy. With it they had struck down the Austrian Hapsburgs and the France of Louis Napoleon. As defeat approached in 1918, after less than five years of the first general European war since Waterloo, mass warfare returned to its revolutionary origins, overthrowing the Hohenzollerns who had perpetuated it.

* * * *

When on November 11 the Armistice ended the fighting, the victorious European Allies were not in much better case than their defeated enemy. France, where morale had long been almost at the snapping point, was now in better heart despite her fatigue, but England was most anxious to end the strain. In the inter-Allied discussions of the armistice conditions to be imposed on Germany, the English leaders urged a softening of the terms first proposed, for fear that Germany might prolong the war by refusing. In the event, however, the terms

were not far from unconditional surrender. The Germans handed over their navy including submarines, together with much of their materiel for land warfare, while the Allies occupied the left bank of the Rhine and three considerable bridge-heads on the right bank, leaving Germany powerless to begin again.



Chapter VII

Between Two Wars

1918-1939

"War is now more than ever a social problem."

—BRITISH ARMY FIELD SERVICE REGULATIONS.

FROM THE AUTUMN of 1918 to that of 1939 the world saw no major war. There were minor conflicts, some of which—especially the Russo-Polish war of 1919-'20, the Italian-Ethiopian war of '35-'36, and the Spanish Civil war of '36-'39—would once have seemed large affairs. To us however, accustomed as we are to hostilities on a colossal scale, they were secondary to the military policies of the great powers and to the potential of strife throughout the world. Military policies were in turn affected by military theory which was greatly discussed—as is natural in a time of comparative peace following vast armed efforts.

First as to the potential of strife: in 1919 the world was sick of battles. A wiser age could have used this mood for the foundation of a genuine peace. Instead the treaties of 1919 settled nothing because they fell between two stools. They made neither a peace of reconciliation nor a peace of destruction.

Prussia had been the soul of the Central Powers, and her leadership over the other Germans might have been destroyed. Her territory might have been so curtailed by setting up other German-speaking states under the protection of the victorious Allies that the artificial nation founded by Bismarck would have disappeared. By contrast, the House of Hapsburg might have been preserved as a counterpoise to Prussia. Although the

Hapsburg territories must have been diminished on the south for the benefit of Italy and of Serbia, they might have been increased on the north by the addition of Poland, at the same time giving Poland a secure access to the Baltic.

On the other hand, if the national sentiment of Prussianized Germany was to be respected, then both materially and morally that state should have been moderately treated. Although she might have been partially disarmed, yet no move should have been made to impoverish her. She would then have had a stake in the existence of the new order in Europe. Especially, nothing which her people would consider an insult should have been put upon her honor.

In the event, the fearful passions of mass warfare prevented reconciliation, and the desire to recover damages for the appalling physical destructiveness of such warfare helped to prevent Prussia's political destruction. I say "helped to prevent" because the feeling of respect for national sentiment also affected the decision. Had Prussianized Germany been destroyed, then the possibility of reparation payments would have been diminished, because the non-Prussian German states—the Catholic south, the Catholic Rhineland, an enlarged Saxony, perhaps an independent Hanover under a British Prince, etc.—must have been more kindly used than the remnant left subject to Berlin. An impoverished world, especially devastated France, passionately desired all the reparations that could be had. Consequently the political framework of Prussianized Germany—always an aggressive state—was left intact, while the non-aggressive Austrian Empire was allowed to fall to pieces. At the same time a world in mourning, systematically doped by four years of propaganda, was in no mood to shake hands with enemies in whom it had been taught to see devils in human shape. Consequently Germany was injured in every way compatible with the maintenance of her political unity, which was left to her so that she might pay. In defiance of the wise Eighteenth Century principle of respecting a conquered enemy's conscience as if it were one's own, the treaty of Versailles contained a "War Guilt clause." Article 231 said in part: "...Germany accepts the responsibility of Germany and her Allies for ... all the loss and damage to which the Al-

lied and the Associated Governments and their nationals have been subjected as a consequence of the war imposed upon them by the aggression of Germany and her Allies." Since the Germans, who had their own propaganda, did not believe in their own guilt, and since their inner thoughts obviously could not be coerced, such a clause was gratuitous and superlative folly.

Thus horde warfare, so long impotent to win victory and so wasteful in winning it, made real peace impossible. The treaty of Versailles, although it left Prussianized Germany still a great power, had no moral force in the eyes of her people. For them it was merely an outrage imposed upon them, to be repudiated as soon as they should be strong enough to do so.

Had Europe still been blessed with strong dynasties and aristocracies as in 1815, a rational solution one way or the other might have been found. Unfortunately the Nineteenth Century which had exalted quantity over quality on the battlefield had done its best to make quantity—i. e. majorities—prevail in government as well. The King of Italy had little real power, the puppet-King of England none. The English aristocracy, although still the master of the country, was beginning to weaken as against demagoguery of the type represented by a man like Lloyd George and as against the plutocratic banking monopoly. Thus there was no longer any power capable of curbing popular passions. Statesmen were no longer the masters but the creatures of the mob.

An effort to supplant nationalism by a single central authority was indeed made. Faint memories of the peace-giving Roman Empire and of the Medieval Papacy seemed to live again in the League of Nations set up at Versailles. Never was there a more empty sham. The League had neither moral nor physical force at its command. It lacked moral authority because—except for a handful of enthusiasts—nationalism and not internationalism everywhere remained the moral reality. Peace in itself, illumined by no ideal of universal justice, was a negative and uninspiring thing. Nowhere were normally patriotic men willing to sacrifice themselves and their own nation to some international and therefore alien body. The League, an artificial creation, commanded no loyalty, for loyalties cannot be made to order. Consequently the idea of

creating an international armed force—which if strong might have made its commanders the rulers of a world-state—was never seriously considered. To give but a single instance of the repulsiveness of such a scheme, the mere idea of giving to any international body the right to adjust either the United States' tariff or their restriction upon Asiatic immigration would be unthinkable to any American. Consequently the League became a mere instrument for the indefinite maintenance of existing national boundaries. To anticipate events, since in theory it was supposed to turn every war, however trivial, into a world war, and since the thought of "making little wars into big ones" was contrary both to the conscience and to the common sense of mankind, it fell into contempt.

The Versailles treaty also abolished the German mass army. Besides depriving Germany of a number of specific weapons—airplanes, gas, submarines, surface warships displacing more than ten thousand tons, tanks, and heavy field artillery—it abolished universal compulsory military service in Germany, and limited the German army to a hundred thousand men. In order to prevent the creation of trained reserves as in Prussia after Jena, the men of this little force had to enlist for twelve years, and only five per cent of them could be discharged for any cause before the expiration of their term. Similar treaty provisions limited even more drastically the armies of Germany's former Allies.

Since England and the United States had returned to small volunteer forces at the peace, the abolition of the German mass army and the disappearance of Austria left only three great powers still on the mass army system: France, Italy, and distant Japan. Such was the disorganization and misery of Bolshevik Russia that her armed forces hardly counted; to this day her chief importance is the strength of the Communist idea. Meanwhile, according to the preamble of the Versailles disarmament clauses, the disarmament of Germany was supposed "...to render possible...a general limitation of the armaments of all nations."

Nothing of the sort occurred. The French cut their term of service to one year, thus lowering the quality of their army toward that of a mere militia, but continued to train every

valid man. All the states dotted across Europe from the Arctic Ocean to the Adriatic set up universal conscript service. In point of actual military policy the armed horde seemed as strong as ever.

Whether or not this was really true, at all events the Russo-Polish war of 1919-'20 was significant both technically and morally. On the technical side it vividly underlined the often neglected truth that trench warfare is by no means applicable to all military situations. Morally it showed the strength of the strife-breeding doctrine of Marxian socialism.

Marx was a Jew whose real name was Mordecai. Full of the strong but crude Jewish sense of justice, he had seen that the vast Nineteenth Century increase in total wealth had gone hand in hand with the impoverishment of millions. There were more millionaires than before, but in the industrial districts of the world the average family had become "proletarian," that is possessed of no productive property and dependent upon a wage. Assuming this process to be the "inevitable" development of the immemorial right of private property, Mordecai-Marx proposed to abolish that right. With the slogan "Workers of the world unite! You have nothing to lose but your chains," he would stir up the propertyless to seize the goods of the possessors. A Messianic dictatorship of the proletariat would then set up a "classless society," a heaven on earth which he described only very vaguely.

As in the case of Darwin, the weakness of Marx' theory did not prevent its wide influence. A better knowledge of history would have taught him that private property need not lead to proletarianism, and had not done so in the Middle Ages when the Just Price, the prohibition of Usury and the Guild system had limited competition and effectively secured the average family in the possession of productive property. Moreover his remedy is worse than the disease, a dictatorship of the unsuccessful seems the least attractive form of dictatorship. In practice Socialism must become Communism, and Communism must be such a tyranny as had never been seen on earth, with the governed as completely in the hands of their government as if they had been legally its slaves. None the less Marx' enlargement of the democratic idea of equality from

the political to the economic sphere suited the time because proletarianism—which he attacked with a typically Jewish disregard of consequences—was and is a real evil. Even more than political democrats he appealed to almost universal human weaknesses; envy and desire for revenge. Also his insistence upon social maladjustment and not inherent imperfection as the source of human evils exactly fitted Rousseau's idea of the inherent goodness and perfectibility of man.

Whatever the merits or demerits of Marx, his teaching is certainly as quarrelsome a doctrine as could be imagined. Foreseeing that owners would not yield without a struggle, he made class warfare not only the right but also the chief duty of men of good will. For him the proletariat was a Messiah, despised and rejected of men yet destined to redeem mankind. As the Messiah cannot compromise with Satan, so the proletarian should give no quarter to his capitalist exploiters. One is reminded of the wholesale massacres in which Old Testament prophets like Samuel delighted.

The Nineteenth Century had seen the establishment of no Marxian state. Socialism had already become strong before 1914; in the last chapter we noted its effect upon the German industrial proletariat whom the Hohenzollerns had consequently kept out of their army. Now in Russia it had caused the massacre and deliberate starvation of tens of millions after a fashion happily unknown on our planet since the Mongols and the Thirty Years War, adding to the sufferings of the Russian people in the war against Germany the further burden of civil war, anarchy and social chaos. Apart from the force of the revolutionary idea, Russian armed strength was contemptible. Nevertheless the Bolsheviks still burned to spread their revolutionary gospel by the sword.

So also resurrected Poland, although cruelly ravaged in the war against Germany, was still willing to fight. The chief Polish motive was the familiar one of nationalism. Hastily and loosely organizing an army, as it were out of nothing, the intensely patriotic Poles longed to extend their borders, especially at the expense of their old enemy Russia—now under Bolshevism the enemy of every traditional decency and sanc-

tity of mankind. Not for nothing is the Communist salute made with the clenched fist.

The worldwide significance of Bolshevism made the conflict between the comparatively feeble forces of the two sides important to all countries. In the universal exhaustion and strain following the Armistice the consequences of a Russian victory might have been enormous.

Technically, on the other hand, the Russo-Polish war was a sort of parody of 1914-'18. As the Generals of 1914-'18, trained for open fighting, had long fumbled over trench warfare, so both sides in 1919-'20 tried to apply trench warfare methods to a struggle between smaller armies in a relatively vast theatre—a situation which those methods would not fit. From the Rumanian frontier northward to the borders of Lithuania and East Prussia was no less than three hundred and seventy five miles. On such a front the little forces, little that is by World War standards, were utterly incapable of forming continuous lines. The numbers of the actual combatants have been most variously estimated. For the crisis of the campaign Pilsudski, the Polish Commander-in-Chief, puts those of the Poles at a hundred and eighty thousand and those of the Russians on the northern half of the front alone between a hundred and thirty and a hundred and fifty thousand. The administrative chaos on both sides, together with the slack discipline of the Poles, makes any approach to accurate figures impossible, but if we accept Pilsudski's estimate of less than two hundred thousand for the greatest number of actual Polish combatants present during the campaign, then these last, if spread evenly in single rank across the theatre of war, would have stood at intervals of over three and a half yards. Thus the linear strategy of 1914-'18 was impossible and the strategy of little masses or groups standing at wide intervals from each other was necessary.

Nevertheless the subordinate Polish Generals whose sole experience of war had been that of the trenches, were always talking about "making a strong line" although such a line was out of the question. To attempt one was merely to fall into the worst vices of the Eighteenth Century cordon, condemning oneself to weakness everywhere.

A comic element was the use of trench warfare phrases concerning artillery action, which with few guns and almost no munitionment was of slight importance. Thus an order to a battery of a Lithuanian-White Russian Division prescribed "a heavy bombardment"—of three shells per minute for two minutes!

A second Polish error, at first shared by Pilsudski himself as he frankly confesses, was to underrate the importance of cavalry under the conditions. Having experienced the impotence of horsemen in the face of Twentieth Century fire power, it was easy to forget how important they might become in a campaign where so many empty spaces existed. Consequently the activity of a Russian "Cavalry Army" against the rear of the southern part of the Polish forces was unexpectedly effective in helping to bring about a general Polish retreat of some two hundred and fifty miles in a month, ending when the left and center of the Polish forces were in the general neighborhood of the Vistula river. Pilsudski however had studied Napoleonic war. In this desperate situation he found the wisdom and resolution to run risks by leaving gaps in his front in order to collect a modest striking force with which to counter-attack.

The Russian Generals now proved themselves at least as incapable in mobile warfare as the subordinate Polish commanders. In trench warfare it is comparatively easy to keep in touch with neighboring units and with the Higher Command. To do so with rapidly moving fronts and small forces scattered over large theatres of war is more difficult. Nevertheless the extent to which the Red Russian Generals failed in this art will startle anyone unfamiliar with the depths to which a bad Command can sink. Throughout the campaign the Red forces were divided into a northern and a southern group of armies. Before the Russian advance the two were separated by the great Pripet or Minsk marshes, the chief strategic obstacle of the region, and when that advance had carried them westward of the swamp area the gap was filled by a weak center group. Ignorant of the weakness of this body, probably less than eight thousand men almost without artillery on a front of over thirty miles, Pilsudski nevertheless directed his counter-attack against it. It collapsed almost without resistance, its Com-

mander sending no report whatsoever to the Russian General Headquarters! The Poles, now well behind the left or southern flank of the north-Russian group of armies, easily rolled it up, the Commander of the Russian Field Army next in line to the routed center group notifying the Higher Russian Command of the Polish advance only on the third day of that movement! The whole northern wing of the Red armies now fell into the wildest confusion. In his bewilderment the Commander of one Russian Field Army sent an unciphered radio message to ask the position of his four Division Commanders. Three failed to reply. The fourth answered "I am at such-and-such a place but do not know where my troops are." A more smoothly running military machine than Pilsudski's improvised force might have destroyed the Red forces altogether. As it was, the Russian losses were great, and the Field Army on their extreme right was forced into neutral east Prussia and interned there.

Peace having been made between the exhausted Bolsheviks and the almost equally exhausted Poles, the way was cleared for the active discussion of military theory.

One thing alone was common to soldiers after the Armistice: a desire to escape from trench warfare. Even the responsible authorities who perpetuated the mass army in France, Italy and the new States, agreed in spending much time on training for mobile campaigns. Although they increased fire power by multiplying the automatic weapons which had produced the trench deadlock, none the less they—somewhat irrationally—continued to hope for movement under fire.

Theorists and writers upon war were divided into two camps. A small minority in which Ludendorff was the chief figure, proposed to carry Clausewitzian war with its mass armies and its vast efforts and sacrifices even further. Instead of making war an instrument for the attainment of political ends, they proposed to make policy and indeed all society an instrument for obtaining victory. This was to be achieved by methods which in the United States have received the general name of "the universal draft." All peaceful activities should combine to build up a maximum of armed strength. From the outbreak of hostilities all labor and all capital must

be absolutely at the disposal of the government, which in turn will become a sort of annex to the Higher Command of the armed forces. As mass warfare at best is a suspension of civilization and when prolonged is in itself a social revolution, the "Universal Drafters" mean to make that revolution complete.

To demolish all this—on paper—is so easy that it need not long detain us here. Whatever we may think of art for art's sake, war for war's sake is a thing which the reason can hardly contemplate. Such a suicide of common-sense and such an enthronement of mere combative emotion is indeed a logical consequence of the Rousseauist preference for instinctive emotion over reason, but it would require a degree of collective folly hitherto unknown to man. Realistic observers of mankind and of history, while admitting the possibility of attempts to organize delirium, will expect such spasms to be short. Availing themselves of the current Freudian jargon, they with the late Professor Babbitt will expect "a great sub-liminal uprush of common-sense." The ignorance and stupidity of man, however great, are not absolute.

We may quit the subject with a note that Ludendorff's "Wars of unlimited sacrifices" which a witty Frenchman has more aptly termed "Wars of Hell," were everywhere seriously considered. Almost everywhere the "Universal Drafters" dominated policy. One wonders how long their misrule will survive the test of actual war.

One turns with much intellectual relief to the majority of recent theorists. In their several ways the members of that majority agree in seeking to substitute rational for irrational war. Each has had the wit to see that the rational object of conflict is not victory in itself but only victory as a means to a better peace.

Consequently all have sought at least a partial substitute for the mass army. All have agreed that Twentieth Century wars between great powers mass armies will continue to imply trench warfare. Since such forces must be huge, as well as of low training, and therefore unable to manoeuvre, they can only collide head on. Given the strength of the modern defensive, their collisions will promptly become trench deadlocks to be

decided only by exhaustion. Like all the world, the majority of theorists had looked into the abyss of universal exhaustion, and from it smelt the breath of the pit. Authority might in desperation continue mass armies as supposedly necessary military instruments, but anyone philosophically considering the matter could see that practically no war fought with such armies would repay the inevitable losses and sacrifices. Nor could that game be played with the margin of safety which had existed in 1914, for the world was now much poorer and its social discipline slacker. Any attempt to repeat 1914-'18 would therefore bring revolution much sooner than before. Only some quicker and less expensive means of forcing a military decision would make the game worth the candle.

Few of the new theorists have talked of abolishing the mass army altogether. Most have agreed in seeking to subordinate it to other military means. In general these proposed means have been three: first airplane bombing of cities; second small, highly trained ground armies; third a combination of the new weapons, tanks, planes, and gas.

That one of the new theories which has most impressed the popular imagination has been the airplane bombing of cities. Everywhere a few years ago one heard people saying "the next war will be fought in the air," "the safest place will be the front line trenches," etc. Moreover the reasons for such a state of mind are obvious. The curse of 1914-'18 had been immobility, while the plane is superlatively mobile. For ages men had dreamed of flying, so that everything connected with the sudden realization of the old dream was spectacular. Flying fighters were "the knights of the air." Air raids on cities had monstrously impressed the world, and now planes were rapidly increasing both in numbers and quality. The constant danger of flying even in peace was and is attracting to the Air Forces young men of dash and initiative, full of enthusiasm for the new arm. Being human, airmen have seldom discouraged proposals for increasing the importance of their profession.

Among the many prophets of air power throughout the world the best known and the most systematic writer was Douhet,

an Italian General of clear, original and logical mind as well as extraordinary force of character.

According to him flying can so modify the technique of future warfare that only the broadest general principles of previous military thought remain unaltered. The whole military policy of nations preparing for war must be examined in a new light. War is one. Its single object, victory, is achieved by imposing one's will upon one's enemy, no matter by what means. The base of all armed effort is the nation itself, from the resources of which all preparation and combat are nourished. Conversely, those resources limit the amount which can be spent. Consequently the first question to be decided is: What possible combination of the various forms of armed effort will give us the best chance of victory? Not necessarily victory over an enemy's armies and fleets, but over a hostile nation considered as a whole.

Formerly this question was simple. There were only two sorts of organized force, the army and the navy, which overlapped very little. Within gun shot range fleets could bombard a coast or shore batteries a fleet, but in strategy a government had to decide only what proportion of its available funds should be spent on increasing its chances of success or reducing the risks of failure by land or sea. The airplane has complicated matters because within its radius of action it knows no obstacles and can fly equally well over land or water. Moreover it can attack the enemy's rear areas, his bases and the interior of his country. Thus it can act in no less than four fields: independent attack, or to protect its homeland against hostile air attacks, or to support its own army, or its own navy, so that its strategy is more flexible than that of any surface force. It is a peculiarly offensive weapon, for in the air as on the high seas there are no defensive positions within which a smaller force can hold out for some time against attacks by a larger force. Also its mobility and the number of objectives open to it on hostile territory make it strategically more effective in attacking such territory than in protecting its own, for planes intent on protecting their own country must be widely scattered in order that some of them may be in time to meet the attackers over whatever spot the latter may strike,

whereas the attackers can concentrate. By coincidence, this new offensive weapon appears just at the moment when modern armament has made the defensive so strong between surface forces that it is almost impossible for them to defeat one another except by the slow and ruinous process of exhaustion. Only the plane therefore is now really capable of the offensive which is the soul of war. Nor is it relevant to say with former military thinkers that the objective in war should be the destruction of the organized hostile forces. Their defeat used to be necessary because they covered the hostile population, preventing the putting of pressure upon that population by invasion or blockade. That defeat however was only a necessary preliminary to such pressure or the threat of it, and the real objective has always been the population itself. By a second coincidence the new possibility of attacking the hostile rear areas comes at a time when mass or totalitarian warfare, turning whole nations into supply departments for their armed forces, has blurred the old distinction between civilians and fighting men. If one man makes a knife and gives it to another so that the second may commit a murder, both will be hanged if caught. So girls working in a munition factory are as legitimate targets for bombs as the soldiers who shoot off the munitions. Indeed it is difficult to drop a bomb anywhere in hostile territory without hitting someone whose labor is important to the hostile armed forces.

Moreover the great cities in which modern life is concentrated are ideal targets. Their great size makes them easy to hit, and few of their buildings are proof against either poison gas or explosive bombs. Their emotional populations are subject to panics, which will be increased if gas is used against them. There is therefore a chance that life might be made so intolerable for them that they might compel their governments to surrender.

So far Douhet and the "air frightfulness people" are on strong ground. With this last statement, however, their arguments become more doubtful because no such surrender has yet occurred.

The characteristics of modern armament, together with the geography and resources of Italy, led Douhet to the following

formula: resist on the surface in order to mass in the air. For him the true economy of forces would be to expend just so much money and preparatory effort on the army and navy as would enable them to stand successfully on the defensive. If soldiers and sailors demand auxiliary Air Forces permanently attached to the army and fleet, let them find the money for such Forces out of the sums allotted to them for their defensive missions. The lion's share of money and effort should go into a powerful Independent Air Force which might, as we have seen, support the army or navy, or might help to defend the country against hostile air attack, but would probably find its most effective use in attacking the hostile country directly. Since the plane can act so in many theatres and other arms only in one, to get the most out of it is to get the most out of the whole. To co-ordinate the entire armed effort and especially to determine the missions of the Independent Air Force, the Italian prophet of air power proposed a single Defence Ministry and a single Commander-in-Chief.

While admitting that existing Air Forces, organized chiefly as supports for armies and fleets, were incapable by themselves of deciding a war, Douhet considered such an Air Force as he proposed the best means of doing so and that quickly.

As to materiel, he would admit in his air armada a few reconnaissance machines, unarmed but of great speed and equipped with radio transmitters. The great majority of his planes were to combine bombing power with a formidable armament of pieces so mounted as to concentrate fire in any direction. By eliminating dead angles the individual superiority of the chaser or fighting plane over the old fashioned bomber would—he thought—disappear, and the chaser would become a useless type.

It being impossible to force aerial battle upon an unwilling enemy, he would mass his air fleet for great raids against ground objectives, not trying to avoid the hostile planes by hit and run tactics but gladly accepting battle in the air if offered. As we have seen, the abundance of points to be defended makes it practically impossible for an Air Force strategically on the defensive to concentrate. Consequently any considerable body of raiders will be superior in numbers to the defending planes

assigned to any one point. Since the latter must fight in order to accomplish their mission, they will be quickly destroyed by the raiders flying in formation. As a result of such aerial battles, the more planes one side assigns to the defence of its own territory, the quicker will the other side gain general air superiority. The same will be true of the planes assigned to auxiliary work in support of the army and navy, they will not assist in the all important struggle for air mastery. To get the greatest surprise effect, bombing should begin before a declaration of war. "One morning at dawn the capitals, the great towns, and the great centers of aviation will be struck by surprise as by an earthquake." In each raid the bombers should begin with high explosives, then use incendiary bombs, and finally use gas in order to prevent the fires being put out. As an Air Force is the most versatile of the fighting services, so gas, the most versatile of weapons, is the ideal means of air attack, being not a linear arm but acting by volume and over a certain duration in time.

By such methods Douhet thought a superior Independent Air Force could soon gain the mastery of the air, which he defined as making it impossible for one's enemy to accomplish any appreciable act of aerial war. Even if the weaker side acts correctly, putting its whole air effort into bombing the ground organization of the side which is stronger in the air, nevertheless its own aircraft factories and depots of air materiel will be so knocked about that its Air Force will presently wither away, while the stronger side will grow relatively still stronger since its losses will be more readily made good by the manufacture of new planes. The impossibility of a tactical defensive in the air will prevent postponement of the decision.

Here, for once, the thought seems not altogether clear. Since the enemy's aircraft factories, hangars and air fields, in short the ground organization of his planes, are logically the first targets for air attack, why insist so much on the vulnerability of cities to surprise bombing without a declaration of war? To try to strike a hostile capital "at dawn as by an earthquake," is a dissipation of effort if the general bombing of promising objectives should follow and not precede the laming of the enemy's Air Force. Douhet may have thought that, even in

the first shock, such defending planes as could get to air would do so to try to defend their cities, and would be more easily destroyed there than on the ground, thus hastening the general air decision. Elsewhere his ideas, whether mistaken or not, are as clear as ideas can be.

The mastery of the air which he hoped to obtain so rapidly would, he judged, be definite and final. In other words, a nation once thoroughly beaten out of the air by the cutting off of its Air Force at the root, would be unable to reconstitute such a Force. Any attempt to do so would be easily crushed before it had gained headway.

Having gained air mastery, the victorious party could then decide whether to use its Air Force to support its army or navy or to concentrate on bombing the hostile home territory. In any case its own territory and its surface forces with their bases and communications would now be immune to air attack. On the whole Douhet preferred cities, factories and in general what were once called civilian rather than military objectives as his targets, the former being more vulnerable and manned by less disciplined people more subject to panic. Although like all the world he had noted the widespread terror and consequent derangement of civil life by the air raids of 1914-'18, which actually inflicted only insignificant material damage, nevertheless he did not rely primarily upon panic but considered it secondarily as the result of raids which would inflict far more material damage than those of 1914-'18. Especially he relied upon concentrating the bombing effort in time, calculating that half of the aggregate destruction spread by the bombers over the four and a half years of the war against Germany would have been decisive if accomplished within three months, and that one quarter of that destruction would have sufficed if concentrated into a single week. During the late war, so he estimated, the Italian city of Treviso received about seventy five tons of bombs, which quantity, if dropped in a single day and if divided into his three categories of explosive, incendiary, and gas bombs, would have destroyed the place.

The impossibility of accurate bombing and the consequent certainty that air attack upon cities would involve killing children and old people who could not count as military assets

even in the most highly developed form of totalitarian war, he admitted: but in dealing with those prejudiced against baby-killing, he was fertile in arguments, as his followers throughout the world still are. In the best Clausewitzian style he reminded the world that war is horrible at best, and that "any principle of moderation is foreign to its nature." Since there are no gentle means of destroying and killing, there are no barbarous or civilized weapons. There are only effective and ineffective ones. To-day the whole destiny of nations depends upon war, and a nation fighting for its life cannot hug humanitarian scruples. For the military technician the atrocity of air-gas war and its effect on neutrals are unimportant. Since in the moral sphere the motive of national wars is the noblest possible, i.e. the safety of one's mother country, all means are justified. One must think first of victory, afterward of humanity. "War cannot discipline itself." "Anything rather than die" as a nation.

Finally the horrors of attacking civilians are really mercies in disguise because they will shorten the war. Since air attack operates quickly, the aggregate sufferings of old men, women, children and others killed and wounded will be much less than the grinding miseries inseparable from the prolonged struggles which will result from attempts to repeat old fashioned strategy.

The number of believers in Douhetism necessitates a careful estimate of its value. Suffice it here that its leading ideas are technically doubtful and politically short-sighted.

On one particular point even Douhet's fervent admirer, the French Colonel Vauthier, considers the Italian's teaching defective: should the aerial offensive not promptly decide a war, then that war might be lost for want of the types of military instruments which take long to manufacture. For instance the construction of a large warship demands several years. As to this Douhet says merely that even if the air offensive does not crush the hostile country, still the mastery of the air will greatly facilitate surface actions.

We must also remember that Douhet writes as an Italian, considering the geographical situation of his country, covered on land by its Alpine barrier and without oceanic naval bases.

Turning now to the general aspects of Douhetism, let us test its foundations by the familiar maxim "two can play at that game" and by the principle that the rational object of war is not victory in itself but victory as a means to a better peace. Clearly the technical argument stands or falls by the truth or falsehood of the air prophets' idea of air mastery. By this, as we have seen, Douhet means that the country which has been defeated in the air will be unable to accomplish any appreciable operation of aerial war. How far the defeat has been accomplished directly by aerial battle, and how far indirectly by destroying the enemy's aircraft factories and the ground organization of his Air Force makes no difference. But can such mastery ever be obtained? If won, can it be kept? And while it is kept will it be strategically decisive either by bombing cities or by acting in combination with the army and fleet?

There is also the question of time. How long will it take to gain air mastery, or at least a definite air superiority? Again, if that mastery or superiority be gained and kept, how long will it take to gather its strategic fruits?

If all these points are decided in favor of the airmen, then there is a chance that Douhetism might prove to be rational war leading to a peace better than that which preceded the struggle. That is, if one party was quickly and decisively victorious in the air and next by means of its air mastery or superiority was able to force the hostile country to surrender without delay, then and then only could something be said for baby-killing.

Even then, however, the case would not be closed. A real peace, remember, must be either one of destruction or of reconciliation. If sufficiently successful in physically destroying life and property, air raiding might achieve unconditional surrender leading to a peace of political destruction, that is a peace which destroyed the independence of the conquered country. Almost certainly, however, the degree of physical destruction necessary for such a result would have to be considerable. In that case the peace, even from the victor's point of view, would be open to the familiar objection that when you and your enemy are parts of the same economic system, to injure him is to impoverish yourself—not a promising foundation

for a better peace, be the means of destruction what they may. If on the other hand you would reconcile yourself to him, baby-killing seems not an ideal means for so doing. For over a generation France was unreconciled to the loss of Alsace Lorraine, and Georgia has not yet forgotten Sherman's bummers. What would have happened in either case had the humiliation of '71 or the devastation of '64 been accompanied by the wholesale massacre of non-combatants? Even if successful in compelling surrender, air attack on civilians seems likely to produce not reconciliation but lasting resentment in proportion to its technical effectiveness. In any such case military paralysis followed by surrender is only temporary. There is no true peace, but instead the victim bides his time, builds up his strength, and awaits the opportunity to strike back, as Prussia and Austria struck France in 1813, or as Germany struck in 1939.

For a nation to burn and gas hostile cities and then to find within itself the generosity and self restraint to impose upon a conquered opponent terms so moderate as to constitute a real peace of reconciliation would be a moral miracle of staggering proportions.

If on the other hand there proves to be a single weak link in the chain of Douhet's reasoning, then the attempt to win a war by such means would merely produce a form of conflict even more irrational than the horde warfare of 1914-'18. War will always be full of chances, and in estimating the likelihood of technical success in the case of so new a weapon we must plunge deep into the unknown. Discussion of the many doubtful factors might be spun out to infinity without hope of definite conclusion. Space here permits only brief mention of a few.

First as to the term air mastery or command of the air: there is reason to believe that it can hardly ever be achieved. Douhet's reasoning that aerial warfare must reach a quick decision because the air, unlike the land, offers no defensive positions behind which a smaller force can resist the attack of a greater is far too simple. It sounds suspiciously like Foch's absurd conclusion that improvements in firearms necessarily strengthen the offensive. In both cases the question is not only one of fire power but also of targets. Since movement in three

dimensions gives great power of evasion—we may compare the submarine in naval warfare—and since aerial battle cannot be forced upon planes which remain on the ground, therefore, as Douhet himself recognizes, the targets or strategic objectives in air warfare must be the enemy's aircraft factories, together with the ground organization of his Air Force. If one side made his factories and ground organization practically invulnerable, as the Germans are said to have done by putting their hangars underground, then there seems no reason to believe that even a greatly superior hostile Air Force could get a decision over an inferior Force so protected.

In this connection naval experience has some value, for air warfare will obviously be more like war at sea than like surface warfare on land. Aircraft have much in common with surface ships. Nearly a century ago, long before flying was a reality, the English poet Tennyson wrote in "Locksley Hall" of ". . . the nations' airy navies grappling in the central blue." Recently the distinguished French Admiral Castex has made a number of valuable studies of the analogies between air and sea fighting, in which the high seas are as empty of defensive positions as in the air. As surface ships have been able to accomplish almost nothing against adequate shore batteries, so planes, which are proportionately much more fragile than battleships, seem even less likely to injure areas of moderate size when covered by anti-aircraft batteries.

In any case, no one knows how much bombing can be endured without serious injury either by the ground organization of an Air Force or by cities in general. We know the microscopically small amount of actual damage done by the air raids of 1914-'18. For instance less than fifteen hundred people were killed from the air in England and Scotland throughout, and persistent bombing by the French Air Force was unable seriously to interrupt railway traffic through the important rail junctions of Metz, Thionville-Diedenhofen, and Longuyon, although all three were only a few minutes flight behind the German lines, but the present position can only be guessed at for want of sufficient experiments. Planes have indeed increased in numbers and improved in quality, but the various means of active and passive defense against them have also improved. Con-

sequently no one can say that because a certain number of planes inflicted a given amount of damage in 1918, therefore ten times as many planes would inflict ten times as much damage to-day. Granting freely Douhet's argument that damage is more effective if concentrated in time, just as a man can easily stand a loss of a certain quantity of blood if spread over a year although the same amount would kill him if drawn from him at once, nevertheless we may already have established a law of diminishing aerial returns. Anti-aircraft gunnery is far better, shelters are more abundant, various palliatives like the evacuation of surplus city population, etc. more developed.

Another necessary general observation of a technical sort is that the idea of a war of "cross raiding," in which both sides concentrate their energies on attacking the other's civilians with the victory going to that side which has the more durable civilians, is contrary to all that we know of the nature of man. In pure strategy such a thing might or might not make sense, in practice it has always proved politically impossible. This has been neatly put by the English Admiral Sir Herbert Richmond in his "Imperial Defence": "... the temper of a people cannot be left out of account. To assure the people whose city is being frequently injured, whose lives are being sacrificed, that they have to grin and bear it with the consolation that similiar injuries are being inflicted on the populations of their enemies, is . . . very little comfort. It does not afford sufficient satisfaction to one whose house and family have been destroyed to be told that the houses of families of the enemy are being destroyed also. He is inclined to reply that that may be, but that what he wants is protection for himself and if he cannot be given it there will be trouble." Thus it was strategically unimportant in 1914-'18 whether or not German sea raiders destroyed the East Coast towns of England, but the British fleet was none the less partially redistributed for the protection of those towns because—as Richmond puts it with admirably humorous understatement—"Their inhabitants looked at the matter with other eyes." We can be morally certain that governments will always find themselves forced to great efforts for the direct defence of populations which are being attacked.

Finally, before quitting the technique of air raiding we must note that direct attack upon a hostile people is not as new as some air men seem to think. Although the fleets and especially the great armies of 1914-'18 were able to keep their rear areas clear of hostile surface forces, nevertheless the German submarine raiders nearly decided the war. In the old wars the side which had the superior battle fleets was seldom if ever able to prevent sea raiders from attacking commerce, and armies were seldom large enough to prevent raiding on land—usually by mounted men, sometimes by infantry landed from ships. Again and again, from Louis XIV to Revolutionary-Napoleonic times, French governments confidently hoped to defeat England by commerce-destroyers unsupported by Ships of the Line. On paper the thing looked easy. Invariably, however, the British light warcraft, secured by their own battle fleets against attack by the French heavy ships, were able to defeat the French raiders. In 1917 the temporary successes of the German submarines were chiefly due to the amazing slowness of the British and French admiralities in adopting the well tried convoy system. Searching back from 1917 through the long and varied annals of war for an example of raids which threatened to be decisive, one must leap no less than a thousand years to the Vikings of the Ninth Century, and even they were forced to accept baptism soon after Western Christendom began to take appropriate measures against them. The innumerable cavalry raiders known to record seem never to have decided a single important conflict. On the contrary, to name only one instance, Lee's sending Stuart's cavalry to raid during the Gettysburg campaign helped greatly to decide the American Civil War against the South.

After recognizing fully that every new instrument modifies war, even such a novelty as flying cannot wholly take away the impressiveness from the invariable verdict of history against raiding. Adequate defence against the possible bombing of cities is indeed expensive. It may be so slow in coming that bombers may achieve some successes. Nevertheless the probabilities are that, in proportion as experience shows air raiding to be serious, appropriate measures against it will be found and will defeat the raiders.

Moreover, for all we know, experience may show the threat of air frightfulness to be far more serious than the reality.

Meanwhile our doubt as to the technical value of Douhetism should be balanced by a moral certitude of its political folly. Although the inaccuracy of aerial bombs makes them indiscriminating and therefore cruel weapons when dropped on cities, nevertheless cruelty in war is no newer than raiding in general. From immemorial time it has been possible to poison wells, burn cities and massacre conquered men, women and children. Before Rousseau's time such things had become rare, not only because they were morally disgusting but also because reason and experience had found them ineffective. Any peculiarly cruel or treacherous act which does not promptly win a war makes victory more difficult by exasperating resistance. Since the prompt disablement of any serious opponent is rare, cruelty and treachery are boomerangs. Between opponents of anything like equal strength, two can play at that game, so that the war merely becomes more bitter without either side being nearer to victory. Indeed such things may actually cause the defeat of the first offender, not only by exasperating his original enemies but also by raising up new enemies against him. What the modern world has learned to call "frightfulness" simply does not pay. Our own time has seen this age old truth written in letters of fire across the world. Had the Germans not broken their pledged word by invading Belgium, in 1914, England would not have fought—as it was, the British Cabinet decided for war by a majority of one. Again, had the Germans not begun unrestricted submarine warfare in 1917, the United States would not have come in, and with neither England nor America among their enemies Germany would have won the war. Still more recently, in Spain in 1936 the Red terror, which had already begun, was intensified at the beginning of the civil war. The resulting orgy of crime, although it may have prevented insurrections which might otherwise have taken place in the rear of the Red armies, did not bring victory for the Reds.

In short, if reason and intelligence always mastered human passions, excessive cruelty would long since have vanished from civilized warfare never to return. To say with Douhet

that neutrals are unimportant or that bombing babies is no more cruel than bombing hostile warships or armies is not only untrue but absurd. Even torture-loving Red Indians often spared women and children. Babies did not have enough hair to be scalped, and female scalps were not considered first class trophies.

By their extraordinary stupidity in morals and consequently in politics, the air frightfulness people are true children of the great founder of modern democracy, Rousseau. That enormously influential writer contradicted all previous moral teachers by saying that man is essentially good, that the evil in him is not part of his nature but results from bad conventions and social arrangements. Since anyone who believes men and women to be basically and wholly good must necessarily want to kill them in heaps when he sees what they really do, the mass massacres of the French Revolution were the logical result of the uncharitable doctrine of natural goodness.

The identity of the mass army with the barbaric horde, the savage mass passions which must accompany its use, and the social disintegration which must follow prolonged mass warfare, are by this time familiar to the reader. But there are also other teachings of Rousseau which fit the air-frightfulness people like a glove.

The masses, he said, should rule over the classes because the former are more virtuous in that they are more natural. In other words the mass man is morally better than the aristocrat, the priest, or the professional soldier because he is less educated and more instinctive. In the same vein, Rousseau exalted instinctive "spontaneous" emotion over reason and intellectual discipline. But there is a further step downward. If indeed the civilized common man be morally nobler because less educated than his traditional social superiors, then the savage should be still nobler than the civilized commoner. This step too Rousseau unhesitatingly took. He and many of the more talented of his early followers never tired of praising the "Noble Savage."

It needs little argument to show the strength of this dubious cult of barbarism to-day. The rage for primitive arts and negro music, the concentration of the anthropological depart-

ments of our universities upon the study of barbarous tribes, are a few out of many symptoms. To be reminded by a recent widespread American cigarette advertisement that "Nature in the raw is seldom mild" was a refreshing but rare exception to the trend.

We are here concerned, however, only with the military results of prolonged admiration for savagery. In 1793 and '94 in our great-great-grandparents' time when the democratic politicians of the French Revolution ordered their soldiers to kill all French Royalist soldiers and all English soldiers taken in arms, and ordered their cruiser captains to take no prisoners whatsoever, almost all French fighting men refused to obey such cruel commands. The orders became a dead letter. Several times, as a convoy of prisoners was starting for the interior, the French rank and file said that the politicians of the National Convention might eat those prisoners if they liked.

Let the reader ask himself this question: after six generations of Rousseauistic admiration for savagery, how many of us men of the Twentieth Century, if we were aviators ordered to bomb a hostile city, would risk the penalty of disobedience by refusing?

Happily we may take our leave of Douhet and his followers by noting that human stupidity and unwillingness to learn, however great, are not absolute. At least he saw that the mass army was no longer a rational instrument of war.

* * * *

The second group of theorists seeking a substitute for the mass army drew attention to the possibility of a comparatively small but highly trained surface army of the old type without special reference to the new weapons. Among them we may cite the American R. M. Johnston and the German von Seeckt.

Johnston, a professor of history closely in touch with army affairs and one of the leading American military writers of our time, published in 1920 a little book "First Reflections On The Campaign Of 1918." Like Douhet he took for granted that future wars between mass armies would be slow and indecisive, ending only in exhaustion: ". . . between 1793, when the great French national levies began, and 1918, a cycle has been

run. . . . even though a national service system will doubtless be maintained by some or most of the great Powers. . . . The presumption in favor of short wars in western Europe has been much reduced by the combination of low training with high power materiel. Indeed now the presumption points far more strongly than in 1914 to the protraction of a struggle turning more on economic adjustments and calculations than on decisive military action. . . . the lower the training the greater the probability of trench or negative warfare." In his opinion, however, the immediate probability of such contests was nil because the west European peoples were so sick of war. Consequently for him it was ". . . almost certain that in the event of war threatening to break out, public opinion will enforce a pacific solution by some means or other. Not for at least a generation . . . is it at all probable that the unmilitary west Europeans will permit their governments to get them into the trenches again."

Douhet's solution by means of air power he rejected decisively and with contempt: "We hear much from civilians and half-trained soldiers about the war of the future being decided by . . . some particular arm, such as the bombing plane. The operations of 1918 emphasize a . . . different conclusion . . . never before has the combination of all arms been so essential and so difficult to achieve."

In working out his own solution Johnston began with the possibilities of a highly trained professional army, without specific reference to materiel. Already in 1917 in his "Clausewitz To Date" he had disputed the Prussian military philosopher's saying: "Surprise resulting from promptness plays a greater part in strategy than in tactics," observing for his own part: "It is not inconceivable that in another generation the world may again see armies highly trained tactically." In his "First Reflections On The Campaign Of 1918" he wrote "It is not sufficiently realized that the armies that fought on the Western Front were all . . . of low training . . . made up of conscripted . . . not of professional soldiers. A force of 100,000 highly trained professional troops could have marched through many places in the Western Front and in either direction. By highly trained professional soldiers I have in

mind men enlisting as boys at sixteen, passing into the ranks three years later, thoroughly competent in another five years and serving eight more years thereafter."

From this point he went on to consider the influence of military geography. In contrast with the probability of at least a generation of peace in Western Europe, he anticipated a series of wars in remote theatres, for the most part thinly populated and in any case without accumulated wealth, but possessing valuable raw materials. In such regions mass armies are impossible because they cannot be supplied. "If millions can be handled in northern France, tens of thousands may be excessive for the valley of the Dvina." Moreover, "with immense numbers, fronts are correspondingly long; the tendency to manoeuvre is superseded by the tendency to dig in, positive war gives way to negative. With short fronts, manoeuvre and tactics come into their own, and against equal or even greater numbers the highly trained army has every chance of success. Low trained masses may secure a negative result in the great industrial agglomerations; but in the remote regions it is the smallest possible force of the highest possible training that will command positive results."

As with so many other of the wiser military prophets, one notes the contrast between correct and incorrect anticipation. As these lines are written in the summer of 1940, Johnston's prediction of no more wars between the great powers of Western Europe remained true for nearly twenty one years. On the contrary, his frequent wars for the control of remote raw material areas have not taken place. Only Abyssinia and China have been invaded, nor has the natural wealth of Abyssinia yet proved important. Even the United States, with a geographical situation which reduces toward zero the chance of its requiring a mass army, has played with the idea of such a military mastodon, and has only begun to move toward the moderately sized striking force which would fit its national strategy.

Von Seeckt was a talented Prussian officer who performed great services during 1914-'18, and might have been even more prominent but for rumored personal feeling against him on the part of Hohenzollerns. After the war he became the chief soldier in Germany, organizing the Reichswehr, the little pro-

fessional army forced upon Germany by the Treaty of Versailles. Incidentally this force numbered a hundred thousand, precisely the number of professional soldiers which Johnston thought capable of walking through the Western Front of 1918 in either direction. As Johnston's wide reading had been focused by much intimate contact with soldiers, so von Seeckt's professional competence was enlarged by a high general culture.

Like Douhet and Johnston, indeed like all reflective men considering 1914-'18, von Seeckt thought mass armies henceforward incapable of waging rational war, and future wars between them little better than mutual suicide. In his "Thoughts Of A Soldier" he wrote:

"To what military success did this universal levy in mass . . . lead? In spite of every effort the war did not end with the decisive destruction of the enemy on the field of battle; for the most part it resolved itself into a series of exhausting struggles for position until, before an immense superiority of force, the springs which fed the resistance of one of the combatants, the sources of its personnel, its material, and finally of its morale dried up, although they were not exhausted. Has the victor really rejoiced in his victory? Do the results of the war bear any just relation to the sacrifice of national strength? . . . The soldier must ask himself whether these giant armies can even be manoeuvred in accordance with a strategy that seeks a decision, and whether it is possible for any future war between . . . masses to end otherwise than in indecisive rigidity.

"Perhaps the principle of the levy in mass, of the nation in arms, has outlived its usefulness. . . . Mass becomes immobile; it cannot manoeuvre and . . . cannot win victories, it can only crush by sheer weight."

And again: "the soldier, who seeks a decision in mobility, rapidity and inspiration, has grave doubts whether armed masses can ever secure a decision, and whether nations in arms can avoid finishing in trenches once more."

On the other hand, "Anyone who has the smallest idea what technical knowledge, what numerous instruments, operated only by carefully trained experts, what highly disciplined men-

tal faculties are needed for the effective control of modern artillery fire, must admit that these essential qualities cannot be taken for granted with men whose training has been brief and superficial, . . . such men, . . . against a small number of practiced technicians . . . are 'cannon fodder' in the worst sense of the term."

At the same time post-war economics, so he thought, would compel the nations to limit their military expenses, especially on the most expensive forms of preparation which are lavish armament and high peace strengths. In peace time too much male labor must not be absorbed in the economically unproductive business of soldiering.

Speaking of course primarily as a German, von Seeckt foresaw future wars divided, as it were, into three acts. Since the existing Air Forces will be immediately available, they will be the stars of the first act, attacking not so much the hostile cities and centers of supply as the opposing Air Forces, and turning against other targets only after defeating those Forces. He did not expand this remark, and by it he may have meant air attack against the factories and ground organization of the hostile air armada. Nor did he agree with Douhet in anticipating a rapid decision as between the Air Fleets. In passing he noted the importance and vulnerability to air attack of hostile troop concentrations, and in general the possibility of hindering the enemy's mobilization of men and supplies by such attack.

In the second act: "The attack initiated by the air force will be pressed with all possible speed by all available troops, i. e. in essence, by the regular army. The more efficient this army, the greater its mobility, the more resolute and competent its command, the greater will be its chance of beating the opposing forces rapidly out of the field, of hindering the enemy in the creation and training of further forces and perhaps of making him immediately ready for peace. While the two professional armies are fighting for the initial decision, the creation of defensive forces is in progress behind them. The army that has been victorious . . . will, while drawing on its own reserves of men and material for the necessary maintenance of its striking power, essay to prevent the newly-formed masses on

the other side, superior in numbers but inferior in quality, from developing their strength and above all from forming compact and well equipped fronts."

Thus the third act, that of the mass armies spreading themselves across the theatre of war, may not take place at all, or only as an epilogue working out a foregone conclusion. It will at any rate be profoundly affected by the first battles between the regulars.

Summing up, von Seeckt says: "... the whole future of warfare appears to me to lie in the employment of mobile armies, relatively small but of high quality and rendered distinctly more effective by the addition of aircraft, and in the simultaneous mobilization of the whole defence force, be it to feed the attack or for home defence." His mobile "operating army," so he thought, had best require no reinforcement whatsoever for its first move, and in any case very little.

Indeed he carried his praise of mobility so far as to include cavalry, as follows: "It would be quite wrong to conclude from the course of the war that cavalry divisions are superfluous and therefore harmful, however apt such an argument might appear at first sight. It is the right conclusion... if one thinks that the next war will be a repetition of the last and assumes that nations will resort to the trenches again. But he who believes that position warfare is the opposite of real war, that it may indeed lead to the gradual disintegration of the side that is weaker in material, but never to the decisive, annihilating victory which is the aim of all military thinking, and who therefore believes that this future victory must be sought in a war of movement, will not relinquish the arm whose essential characteristic is mobility, i. e. cavalry."

At this point the reader who remembers the impotence of cavalry after stabilization on the Western Front, and its inability to accomplish anything decisive either before stabilization there or on the Russian Front may accuse von Seeckt of deliberately making wishes into facts in order to raise the morale of the large proportion of cavalry—sixteen thousand as against seventy eight thousand infantry—prescribed for the Germans in the Versailles treaty. If for "cavalry" we read

"planes, motor cycles, armored cars, and tanks" we undoubtedly come nearer to his real thought.

The disgust with conscription and the corresponding belief in a small, high quality army, has been by no means confined to Johnston's America and von Seeckt's Germany. For instance the distinguished British soldier, Ian Hamilton, in his preface to the English translation of von Seeckt's book spoke of "... that curse, worse than the seven plagues of Egypt rolled into one, which for the past hundred and fifty years ... has distorted the mentality of Europe, i. e. conscription," and praised von Seeckt's Versailles treaty army as an example of "... exactly what the wiser men of peace want to learn; i. e. the art of reducing armies whilst raising the relative standard of efficiency." In France a regular officer on active service who is also a finished and a convincing writer, Lieutenant Colonel Charles de Gaulle, in his "*Vers L'Armée De Metier* (Towards The Professional Army)" powerfully argued that both the trend of military technique and the particular position of France demand such an army. De Gaulle, however, did not think of high training as the primary end to be achieved, with the new weapons as an after thought, but considered it a necessary corollary to the effective use of the new weapons.

Consequently, in spite of the title of his book, he belongs in part to the third group of recent military theorists, to which I now return.

* * * *

The third group of theorists considers future warfare chiefly in terms of the new weapons and only secondarily in terms of professional army service and high training. Its most prominent members are two Englishmen, Major General J. F. C. Fuller and Captain Liddell Hart, in whose writings it is best studied. Their influence has by no means been confined to their own country, they have not always agreed with each other, and neither man has built up a rounded, consistent doctrine of war like that of Douhet or has expressed himself with the concise brevity of Johnston and von Seeckt. On the contrary both have been voluminous writers—Fuller with twenty

eight and Liddell Hart with twenty one published books to his credit, and both are still alive and active.

Thus estimates of their work must be general. Although Liddell Hart has—or had—the larger audience among general readers, Fuller has the more powerful and original mind as well as a greater experience of war. He was throughout 1917 and most of 1918 Chief of Staff in the British Tank Corps, and as such was chiefly responsible for the tank tactics which, according to not a few good judges of war, would have beaten the Germans much sooner than was actually the case, had those tactics been better appreciated and supported by the British High Command. It is thus no disparagement of Liddell Hart to call him Fuller's pupil.

Like Douhet and the apostles of high training, Fuller and Liddell Hart begin by noting the failure of the mass army as an instrument of rational war.

Liddell Hart has shown how heavily the mere existence of such unwieldy armies weighed upon policy: the vast effort of a general mobilization disturbs all society from top to bottom, producing such nervous excitement that potentially hostile governments can no longer negotiate. Thus in 1914 mobilization of itself made war inevitable. Worse still, the mobilization plan actually dictated the form of the war. In Germany the infinitely detailed arrangements for moving millions of armed men had been designed for the sole purpose of a lightning attack upon France. Consequently when in 1914 the Kaiser wished to mobilize only against Russia, and said to von Moltke "We march, then, with all our forces only toward the east," the latter replied that this could not be done. "The advance of armies . . . of millions . . . was the result of years of painstaking work. Once planned, it could not . . . be changed." The Kaiser yielded, and the attack on France was delivered merely because it had been so carefully designed! In other words the mass army forbids strategy to serve policy, and compels policy to serve strategy. Instead of armies existing for the sake of civil society, the latter exists only to support the hordes. The means has become the end and the part has become greater than the whole.

By contrast Liddell Hart has seen the Eighteenth Century

limitations of war not as stupid routines or mere humanitarianism but as the result of enlightened self interest. In this he was influenced by the late "T. E. Lawrence," a temporary soldier of wide military reading who ably conducted the Arab revolt which materially assisted the British invasion of Palestine from Egypt.

Both Fuller and Liddell Hart have returned again and again to the futility and wasted effort characteristic of the larger theatres of 1914-18, especially of the Western Front, the suicidal folly of infantry charges against intact machine-guns, the absurdity of checking one's own forward movement by destroying the surface of the ground through "shell bludgeoning," and the vast change for the better made by the tank. Liddell Hart has repeatedly summed up the chief events of the war in narrative form and with reference to the chief personalities involved. Fuller has concentrated on the analysis of the technical factors at work. In "The Reformation Of War" he has set down the following figures: "In 1916 from July 1 to November 30 the British Army lost approximately four hundred and seventy five thousand men, ... captured thirty thousand prisoners and occupied some ninety square miles of country." During the same months in 1917 "the losses were three hundred and seventy thousand, the prisoners ... twenty five thousand, and the ground occupied was about forty five square miles," and in 1918 "the losses were three hundred and forty five thousand, the prisoners one hundred and seventy six thousand, ... the ground occupied ... four thousand square miles." Thus in 1916 an average of five thousand two hundred and seventy seven English soldiers were killed or wounded for every square mile of ground gained, in '17 no less than eight thousand two hundred and twenty two per square mile, in '18 only eighty six per square mile. "In the third period alone were tanks used efficiently." Even after all possible allowance for the many qualifying factors, the conclusion is impressive.

Both English theorists have been influenced by Douhetism, Liddell Hart somewhat more than Fuller. Indeed since English food ships and the closely packed English cities make their country the most promising target for air raids in the world, it would be strange if the prospect of raids in force were not

of interest there. Fuller however has often pointed out the political disadvantages of air frightfulness, the unlikelihood of its achieving a good peace. He has also gone further than Liddell Hart in considering the inter-dependence of military and social forms.

Both, especially Fuller, have emphasized the loss of offensive power by infantry and the possibilities of combining air work with mechanized action on the ground. Obviously fast tanks supported by small bodies of tractor-carried infantry and anti-tank gunners are admirable instruments for the sudden attack imagined by von Seeckt. Moreover a successful mechanized offensive would soon change the whole circumstances of the campaign in the air, for the speed of mechanized ground forces is such that their advance would rapidly push back the hostile air bases while permitting the rapid advance of the ground organization of their own Air Force.

The chances of success in such an attack have been the center of vast argument which can only be summarized here. Very briefly, the opponents of the tank doubt its power of independent action. As they remind us, the factor of weight prevents its being armored heavily enough to withstand field artillery. Moreover it has little power of protecting itself when not in motion, so that—for instance—when halted for the night the Tank Force needs an escort. Consequently they consider it merely an auxiliary or an accompanying weapon for infantry, useful at most in facilitating the advance of the latter. Infantry alone, they say, can occupy conquered positions or territory, and can either defend or attack. Consequently, for them, men on foot are still the chief arm.

To this the believers in mechanization, led by Fuller, reply that the tank has two functions. It is first an armored vehicle capable of charging and in-fighting, second a mobile gun mount. Although its armor is indeed vulnerable to field artillery and perhaps to other anti-tank projectiles, nevertheless that armor does give it a measure of protection. Although it could not resist a direct hit from a high explosive shell, it would keep out shrapnel and shell splinters which would kill unarmored men within range of their burst. Further, a tank in motion is hard to hit because of its speed. To true infantry weapons it is

invulnerable. Even the machine-gun mounted on a fixed mount, and therefore too heavy for a true infantry weapon, can do it no harm provided such a gun fires ordinary infantry ammunition. Large calibre infantry rifles of the elephant gun type such as the Germans used in the later months of 1918 are at least as dangerous to their possessors as to it. Even if one of their bullets penetrates the armor it will probably not disable the tank, while their recoil will smash the shoulder of a man who fires one lying down. If he stands, as a hunter would do when firing upon an elephant, he must expose himself. Moreover few men will aim coolly with a tank rushing toward them at close quarters.

Specifically anti-tank weapons are either small cannon like the thirty seven millimeter or else machine-guns of large calibre, say half an inch or more, but none of these are true infantry weapons because they cannot be carried and fought by a single man. Every such piece requires a team of two or more men, if not to fight it when in position then at least to carry it into position. There is also the question of ammunition supply. In practice most such weapons and their ammunition require vehicles with animals or motors to move them. In short they are really light artillery. This distinction is by no means merely verbal; it means that the infantry cannot march and manoeuvre at the same speed or cross difficult country as formerly because they will be tied to their anti-tank guns. Since there are now tanks which can go forty five miles an hour while three and a half miles an hour was always a good marching speed for infantry, to reduce that rate still further will be to turn the latter into unarmored snails fit only to hold entrenched lines or to occupy positions already conquered by their own artillery. Against adequately defended fronts infantry offensive power, already low enough in 1914-18, will be still less because of the steady increase in automatic weapons. Thus footmen will be reduced to the subordinate position which they held for nearly a thousand years in the Dark and Middle Ages.

The one way to give infantry accompanying weapons speed combined with power to cross obstacles would be to mount those weapons on motor driven caterpillar tractors, in other

words to put them into tanks. This however would produce an ill balanced force, as it would waste the surplus mobility of the accompanying guns by tying them to the snail's pace of the foot.

Again, the tank or motor driven caterpillar tractor may be considered less with reference to armor than as a mobile gun mount. Here the analogy with naval war, already useful with reference to the airplane, again comes in. Obviously if mobility and handiness are at all equal, the weapon of greater range and power will defeat lesser arms. Thus infantry weapons once played a part in the close fighting of naval engagements, in fact they were all important when boarding a hostile ship; but later their rôle was reduced toward zero by the gun. Now that the motor driven caterpillar tractor has given land guns far greater mobility than that of infantry, it seems reasonable to suppose that the status of the latter will fall toward that of land marines. The usefulness of highly mobile artillery needs no argument. Against an army of the old type such a force could develop a heavy volume of fire against one sector of a hostile front, draw the hostile reserves thither, and then disappear to strike swiftly against another sector.

The mention of land marines reminds us that without sacrifice of mobility a tank force operating independently might well take with it, mounted on cross-country tractors, not only a "defensive component" of machine-guns and anti-tank guns but also a few infantry for mopping up and guard duty.

Finally a tank force, with its armor and its small numbers compared with a mass army of infantry, will be much less vulnerable than the latter to air attack. When not in motion it could be protected by camouflage.

The high cost of tanks will always keep their numbers comparatively small. We may compare the limited numbers of knights and other fully armored heavy cavalry in the Middle Ages when—as we saw in Chapter II—the cost of full equipment for a single man equalled the annual rent of a farm. Hence, although such a combatant was thought worth ten unarmored fighters, poor peoples like the Scotch had few of them and still poorer folk like the Irish had none at all.

Incidentally a Medieval knight was always accompanied by at least one armed servant of some combative value, especially on the defensive, just as "land marines" might accompany an independent Tank Force.

Like the debate about air power, that about mechanization cannot be decided without a number of tests in actual war, especially in wars between great, wealthy states. Unlike Douhetism, however, the value of mechanization is wholly a question of military technique because the possessor of a mechanized force is not tempted to politically doubtful courses like baby-killing as is the possessor of planes. In pure theory it seems impossible to deny altogether the value of armor or to question the effectiveness of mobile, tractor-mounted guns as compared with infantry weapons. If these things are indeed true in theory, then sooner or later they will be proved true in fact. In other words, mass armies of the old type, built around their infantry and estimating their strength by the number of their rifles and bayonets, seemed doomed to decline.

On the other hand this conclusion is not a sure guide to the immediate future because we cannot tell how long the decline may take or how far it may go. The worst enemy of soldiers cannot justly dismiss their professional conservatism merely by calling them stupid. Soldiers can reply that theirs is a peculiar science, in that they cannot experiment fully in peace. Similarly, sailors are rightly reluctant to alter greatly the design of a ship which has seen them safely through storms. As an extreme example of time-lag we may cite the muzzle-loading field gun, drawn by animals and forced to unlimber for action, between 1500 and 1800. At Ravenna in 1512, and again at Marignano three years later, field artillery played a great part in deciding a general action. Thereafter for nearly three centuries in spite of improvements in materiel it did nothing of the kind. None of the many able soldiers of those nine generations between Marignano and Napoleon made field guns a decisive factor. Just so our children may see not a few attempts to use mass armies, in which conflicts the chances of war and the divine accident of leadership will play their part as well as the intrinsic merits of this or that weapon or system of recruitment.

Without dwelling too much on so dismal a possibility as the survival of the armed horde, we may quit the majority of post-Armistice theorists by noting how much all three groups—the Douhetistic Air Men, the advocates of high training, and the believers in mechanization—have in common. Von Seeckt, in spite of his emphasis upon the instruction and quality of personnel rather than upon materiel, nevertheless brings in the characteristics of the materiel of to-day with reference to contemporary artillery. Moreover his failure to mention other new weapons such as the tank was undoubtedly a deliberate, diplomatic omission, for he was writing in a Germany still forbidden by the Versailles Treaty to possess the newer weapons. Nor did Johnston's preoccupation with command and staff work blind him to the material side of war. Conversely, the mechanized school recognizes that mechanization implies a highly trained personnel. On the one hand the comparatively small number of men necessary to handle the costly machines of a mechanized army will permit governments to give those men a longer term of service and a more thorough training than a conscript mass can receive. On the other hand it obviously does not pay to put expensive, powerful, and—to some extent—delicate machines in ill instructed hands. Fuller in his remarkable pamphlet, "The Natural History Of War," sees future mechanized armies as composed of highly paid professionals, and Liddell Hart has often gone so far as to claim that the vulnerability of mass armies to air attack will make such armies positive disadvantages to their own side. With regard to air power the limitation of numbers is self evident: even if cost would permit the manufacture of planes by the million like rifles and bayonets, very few of the individuals of a conscript mass could be made into useful military Air Men. In America the education of an army air pilot is said to cost \$25,000. Outside of America, where the average of mechanical skill is higher than any other country with England in second place, few conscripts could even operate and repair an internal combustion engine.

In short almost every man of creative mind who has taken a broad view of 1914-18 has expected to see future wars de-

cided not so much by conscript masses as by smaller and more thoroughly trained forces.

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Turning to concrete military events, we may call the smaller wars of the last decade footnotes to military theory. Technically the Italian conquest of Ethiopia, the Spanish Civil War, and also the Japanese operations on the mainland of Asia which still continue at this writing, have been interesting chiefly for whatever light they threw upon the next war between great powers.

The Japanese campaigns in Manchuria and in China proper have met little highly organized resistance. The difficulties of the invading commanders have been chiefly those of maintaining public order in districts long accustomed to banditry and without effective government. The military lessons have turned chiefly on the use of planes. These last have done good service in scattering forces already in demoralized retreat, as they did in 1918 in Palestine and at Vittorio Veneto. The results of Japanese air raids upon Chinese cities have been more questionable. The Chinese have few anti-aircraft defences. Nevertheless in comparing the cost of the Japanese bombing effort with the damage done, it is a joke current among foreigners in China that it costs the Japanese a thousand dollars to blow a hole in a building which the Chinese can repair for two "Mex," that is an expense of two Mexican dollars worth fifty cents each. For what the experience may be worth, at least some small doubt seems to have been thrown on the ideas of Douhet and his followers.

The interest of the Italian conquest of Ethiopia is on the whole similar. An area about 350,000 square miles, lacking internal communications and more than 2500 miles distant by sea from Italy, was conquered in only seven months, from October 1935 to May 1936. The need for haste was because of the partial blockade declared against Italy by the League of Nations under British leadership. That civilized men should beat barbarians is normal, but the new means of transport and the new weapons certainly hastened that end. The tank played no great part, the light Italian machines proving defective in

design. Their machine-guns could fire only within an arc of forty five degrees in front, nor did they permit all around vision. Pistol Ports on their sides and rear would have greatly improved them. With gas it was a different story. Persistent gases of the type known in 1918 as mustard gas were effective in covering the flanks of troops in defensive positions and of marching columns when halted for the night near hostile forces. At least once, when sprayed from planes, such gases demoralized both the defenceless and barefoot Ethiopian soldiers and the population in a certain district. As in China, however, the chief technical novelty was the plane, favored by the lack of Ethiopian anti-aircraft defence. Notwithstanding this deficiency, air raids against mud huts and other poor houses of Ethiopian towns seem hardly to have been worth the candle, but on the other hand the Italian Air Force proved able to break up concentrations of Ethiopian troops. Also planes were of use in carrying supplies to the advance guards of ground forces, especially if the latter were operating in desert country. Without the skill and the tireless labor of the Italians in building roads passable for heavy trucks, and without the unwisdom of the Ethiopians in delivering massed attacks which could be mown down by Italian machine-guns, the decision would have been delayed. Nevertheless gas and especially planes considerably hastened matters.

The Spanish Civil War of 1936-39, like the Russo-Polish War of 1919-20, was due to the profound opposition between Marxian Communism and traditional ways of living; the worldwide nature of the issue causing both sides to be supported by friends abroad as in the Sixteenth and early Seventeenth Century Religious Wars. In the beginning the armament of both sides was slight, so that not only the new weapons but also artillery played little part. Most of the fighting was between infantries armed with rifle and bayonet and a few hand grenades. Such artillery as the Reds or so-called "Loyalists" had was seldom effectively handled. Throughout the struggle neither side used gas. The victorious march of Franco's little "Army Of Africa" from the Straits of Gibraltar to the outskirts of Madrid was made against greatly superior numbers

of improvised troops, the most conspicuous example since 1793 of military quality defeating quantity.

With time the numbers of both sides increased, equipment improved, and on the Nationalist side organization and training improved as well. As in the Russo-Polish War, however, numbers remained small enough in proportion to the theatre of war to forbid the formation of continuous fronts. Thus cavalry, although not so important as in 1920, was nevertheless effectively used. Over most of their length the so-called fronts were only lines of observation consisting of widely spaced and lightly garrisoned little posts.

A few planes and tanks had been present from the beginning, and as the war developed they began to be more systematically employed. The Russian and French tanks on the Red or "Loyalist" side were handicapped because of the insufficient training of their crews and also because the tactical defensive usually adopted by the Reds limits the scope of such essentially offensive weapons. On the Nationalist side, although tanks were neither numerous nor fast enough to be used independently, nevertheless they proved useful auxiliaries to the infantry. Wisely wishing to avoid useless slaughters of assaulting infantry like those of 1914-18, Franco habitually economized the lives of his men by making no attacks which could not be thoroughly prepared. Waiting until he had a good stock of munitions in hand—hence, indeed the considerable pauses between his offensives—he would begin an attack with artillery bombardment. Next his planes, flying low, would bomb and machine-gun the Red positions, then his tanks would advance, with the infantry last of all.

In the middle period of the war the planes of both sides frequently raided the cities of the opposite party, until the weakening of the Reds led them to use what was left of their Air Force to try to stop the advance of the Nationalist Armies. In spite of the nearness of the air bases to the targets, the material damage done was small compared with the effort made. In Barcelona, after shelters had been provided and a few anti-aircraft guns mounted, it took an average of half a ton of high explosive to kill one person. Once four hundred and fifty five bombs killed only two. Everywhere panic in the

raided towns seems to have been conspicuously absent. During the third week in March 1938 Barcelona was bombed no less than thirteen times in just over forty one hours, each raid being made by half a dozen planes. For the time being the life of the city was largely paralyzed, but the effect was only temporary. When the Nationalists entered the place they found that the two thousand raids upon it had left the gas works and central power station intact—the raiders had flown too high to hit such targets. Throughout the last phase the Nationalists and their foreign supporters persistently bombed the ports of Valencia and Barcelona, sinking a number of ships in each but never closing either port to traffic. Again, as in China, the claims of the Douhetists were far from being realized.

On the other hand, as in Abyssinia, planes proved themselves useful auxiliaries in the operations of ground troops.

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Some years before the end of the Spanish War the military balance of power in Europe had begun to shift in favor of Germany. In 1933 Hitler at the head of the National Socialist party took power in that country, since which time the increasing armaments of the great powers and their political acts showed something of what their authorities thought about the theories discussed earlier in this chapter.

The chief political factor in Europe was now the new dictatorships. On that continent no great power except France still suffered or enjoyed parliamentarism. There alone the politicians still kept up their petty game of faction and personal intrigue. Among the lesser powers the victory of the Spanish Nationalists left only Switzerland, Belgium, Holland and the Scandinavian countries still parliamentary and "liberal." With local variations, all the other continental European governments were monarchical, i. e. one-man affairs, of the extreme type known as despotisms.

In their effect on the military situation in their respective countries, however, these monarchies were more like old fashioned democracies than like traditional, hereditary monarchies. Where the old Kings had ruled mildly, normally seeking to calm popular passions rather than to arouse them, the new

masters excelled all previous governments in the technique of stimulating such passions. Hitler for instance is an emotional popular orator who constantly rouses great crowds to an hysterical pitch. All modern methods of communication, the press, the radio, etc., are used to increase the emotional appeal of the dictators to the masses. At the same time the enormous powers of a modern government are concentrated upon suppressing all outward opposition to the dictatorships.

The technical military results of such a government are formidable. While it remains internally secure, an extreme one-man rule can direct the entire energies of a nation to every sort of preparation for war, and can then attack at its chosen moment. In many respects a country so ruled is almost an ideal instrument of war.

Superficially at least, within the limits of time and material resources allotted to them, the Italian and especially the German dictatorships have carried the long term trend or "curve" of war higher than ever before. On the surface, the "universal draft" and the war of unlimited efforts and sacrifices reign unchallenged.

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Postponing to the next chapter our discussion of the reasons for doubting the conclusions of the last paragraph, we now return to the military situation in Europe shortly after the rise of Hitler and the National Socialist party to power.

In 1935 Germany reintroduced universal and compulsory military service. The term of service was short, only a year, but this was presently doubled. Moreover the entire time could be given to training with arms, since the conscripts had already been disciplined and physically hardened, as well as taught simple drill during a year in the camps of the compulsory labor service. Although the number of trained men would of course increase only gradually as class after annual class completed its term, nevertheless the significance of the new law was the return of the entire continent of Europe to the idea of every man a soldier.

How far this return to the mass army meant the abandonment of von Seeckt's ideas no one could then say. As late as

1932 the official publishing house of the Reichswehr had published a book by A. Caspari, "*Wirtschafts-Strategie und Kriegsführung* (Economic Strategy and the Conduct of War)," which argued strongly against such an army. The German people, so the author had contended, were now so infected with Marxian social ideas that they could no longer be depended upon as soldiers. Also, the physical destructiveness of mass warfare would henceforward be so great that the victor would suffer almost as much as the vanquished. He had therefore proposed an agreement by treaty between the powers for the general abolition of compulsory military service!

In practice, however, even if the German High Command still believed in von Seeckt's lightning attack—as the future was to show they did—still the desirability of trained reserves was obvious. While beginning the organization of these, at the same time the Germans also provided themselves with specialized troops for use as striking units, thus extending their practice of training a military élite of Storm Troops or Shock Troops toward the end of 1914-'18. They now organized certain "Light Divisions," at first largely mounted but intended to fight on foot, and swift Armored Divisions composed of tanks and supporting elements. They built up their Air Force until it was the largest in Europe, putting many of their hangars underground to make them invulnerable to hostile bombers. Significantly, the infantry companies of their active army were kept at the full war strength of one hundred and eighty men each, so that they might take the field at once and without dilution of their quality by reservists. Most significant of all, they made considerable efforts to put their airmen and tankmen on a professional basis with a term of enlistment of four years and longer. Exclusive of their Air Force, in their army the proportion of infantry fell to about thirty three per cent and, as in all contemporary armies, many nominal infantrymen were really light artillerymen.

On both sides of the Franco-German frontier, vast fortifications rose to hinder future military movement. For nearly ten years before Germany began to throw off the Versailles disarmament clauses, the French, making a liberal use of steel and reenforced concrete, had been building the massive, largely

underground works known as the Maginot Line. Every precaution was taken to make the defences inconspicuous to ground or aerial observation. Gas protection was provided by machines capable of raising slightly the air pressure within the forts over that outside. The fortified area, although not deep, was extremely solid. Moreover its permanent garrisons were steadily made stronger, as the French lengthened their term of conscript service to meet the rising strength of Germany.

On their side the Germans in 1936 began the fortification of their Western frontier on the right bank of the Rhine opposite Alsace. In 1938, the year of their annexation of German-speaking Austria and of the Czech territories, they found it desirable to hasten the completion of their Western defences. Unable for want of time to imitate the solid construction of the French Maginot Line, they followed the wartime method of defence in depth by means of successive trenches, each covered by a thick wire entanglement and by anti-tank obstacles. The whole system was known sometimes as the Siegfried Line, sometimes as the Limes—the Roman word for a limit or frontier.

Belgium, Holland, and Switzerland all took steps to resist a sudden attack, in part by fortifying their frontiers, in part by strong frontier garrisons which can be rapidly reenforced. The Dutch doubled their term of army service from one to two years.

This immense defensive effort seemed to condemn the ground operations of any Franco-German war to a stalemate like that of the middle period of 1914-18—a ruinous, long affair as all the world knows, demanding enormous quantities of costly materiel and decided at last only by exhaustion. On the other hand the very willingness of governments and people to sink great sums in fortifications hundreds of miles long is an eloquent testimony to the strength of the new mechanized offensive which still had a free field of action in Eastern Europe.

The next military phase has been called that of "wars of nerves," bluff or armed blackmail, obtaining the objects of war by the threat of hostilities without actual fighting. The annexation of Austria by the new German dictatorship hardly comes under this head, for the Austrians made no resistance

and no foreign power seems to have considered fighting for Austrian independence. The German "war of nerves" however was decisive against England and France during the bloodless conquest of Czechoslovakia. How far the French and British governments of the moment deliberately acted a part by emphasizing to their peoples the horrors of conflict in order to discourage the war parties in their respective countries, we need not ask. Suffice it that the threat of hostilities and especially of German planes bombing British cities and food ships was real enough, and was vividly present to the people concerned. The relief in Paris and London when it was decided to let the Germans have their way with the Czechs was unmistakable. The feeling of the Germans, although less conspicuously shown, was the same; they were well pleased at not having to fight. After all, during 1914-18 they had endured not only the war but also the blockade which has been estimated to have killed nearly a million of their civilians for want of food.

The disappearance of the unstable Czechoslovak state did not ease international tension. On the contrary, through the summer of '39 the expectation of war and the fear of it more and more darkly overshadowed Europe. Everywhere policy centered upon preparation by arms and alliances.

For our purpose, the most significant phase of that preparation is the British decision to institute compulsory military training. Compared with the recruiting systems of the continent the long postponed British conscription law was mild enough, so mild that certain opponents called it half-hearted. Only two hundred thousand young men between twenty and twenty one years old were to be trained and only for six months. The immediate military value of the new formations could not be high, their cadres of officers and non-commissioned officers would have had to be improvised, and in part obtained by diluting the existing cadre of the little regular army of less than two hundred thousand men. For years to come, therefore, the tangible military effect of the new system would have been chiefly the speeding up of replacements in wartime.

Nevertheless the significance of the new departure was enormous. In the field of military theory alone it showed that

neither England nor her continental Allies would believe her to be earnestly preparing for war without the organization and training of an English mass army. Although infantry may henceforward be subordinate, certainly it is still necessary. No nation can afford to bid against industry for its military manpower, and to wait for war before beginning mass training is to condemn one's country to an undue delay. Confining ourselves for the moment to Western Europe, forty million Frenchmen could hardly have been expected to resist indefinitely an equal number of Italians plus eighty million Germans while England leisurely prepared. The Higher Commands of Europe were still unanimous in refusing to banish their armed hordes from the battlefield.

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At this point a hasty or superficial historian of the mass army might have said in the despairing words of William Pitt: "Roll up the map of Europe." At the time when the British adopted the mass army now again universal on that continent the armed strain of so-called peace had never been so severe. One had only to open a newspaper to find items which a generation ago would have been unbelievable. In October '38 the distant Argentine planned in case of war to conscript not only its men but its women in order to "provide . . . male and female workers for factories, male and female employees for public services. . . ." In the same month many thousands of Americans fell into the most shameful panic because of an imaginative radio broadcast, intended for entertainment and describing the bombing of northern New Jersey by invaders from the planet Mars. The ignominious details of this orgy of gullibility with its complete failure of reason and logic, have at least the merit of being funny. According to press reports: "In Indianapolis, Indiana, a woman ran into a church screaming: 'New York destroyed; it's the end of the world. You might as well go home to die. I just heard it on the radio.' Services were dismissed immediately."

"Five students at Brevard College, North Carolina, fainted, and panic gripped the campus for a half hour with many stu-

dents fighting for telephones to ask their parents to come and get them."

"A man in Pittsburgh, Pennsylvania, said he returned home in the midst of the broadcast and found his wife in the bathroom, a bottle of poison in her hand, . . . screaming: 'I'd rather die this way than like that.' He calmed her."

In May 1939—hardly less imaginatively—the Governor of Connecticut complained because no anti-aircraft guns were available to protect the munition factories of Bridgeport.

Along with the universal uneasiness and fear, the cost of military preparation in money alone had risen to figures so huge that they seem meaningless. To tell us that the world is already spending a billion a month on armament makes no impression on the mind. Nor can anyone estimate how much, directly and indirectly, the attempts to make this or that country difficult to invade or invulnerable to blockade have cost. To give but a single instance, the unhappy Poles are said to have deliberately refrained from draining the swamps on their eastern frontier for fear of invasion from Bolshevik Russia and from improving the roads near their western frontier for fear of invasion from Germany.

Everywhere it seemed that the strain could hardly be eased except by another great war. Everywhere most people expected such a struggle to follow closely the general lines of the last huge conflict, plus hurricanes of "air frightfulness." The expected war came, but in a very different fashion.

Chapter VIII

The Descending Curve of War

"The people directly concerned are . . . alive to the realities of the situation. The ordinary citizen of France, Germany and England has had it deeply wrought into his consciousness that it is worse than unprofitable to take the field as a soldier."—R. M. JOHNSTON, Published in 1920.

SHOULD HASTY READERS take the title of this chapter for a bad joke, one may sympathize with their feeling without sharing their conclusion. Writing in July 1940, we will venture to predict neither the result of the present war nor the course of events after its close. Without, let us hope, either undue optimism or pessimism, we shall content ourselves with setting down the many strong reasons for believing that, compared with 1914-'18, the long term trend or "curve" of war is descending.

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In that connection we may consider the variations of so simple a matter as the tides. Their general scheme is easily grasped: twice a day for a little over six hours the water rises, flowing into every creek and bay, then for two other similar periods the level falls again and the current flows out. But when we begin to study them we find all sorts of local variants. Some seas have only one tide a day, others have none. There are places where the current plays all sorts of tricks. In the harbor of Edgartown, Massachusetts, the first of the flood comes in directly from the sea and flows from south to north, while the rest of the same flood comes in from Nantucket Sound and flows from north to south. Between Nantucket

Island and Cape Cod the flood current actually runs out from the Sound to the Sea and the ebb runs in from the Sea to the Sound. On Nantucket Shoals and on many other offshore shoals there is no flux and reflux at all; instead the current keeps changing its direction like the hands on a horizontal clock face. No one unread in the matter and seeing such things for the first time could make head or tail of them, and yet these tidal anomalies are simplicity itself compared with the myriad forces of thought and action constantly at work in any human society.

But perhaps the most suggestive comparison between the tides and the movements of human affairs is the difference in time between the changes in the water level and the change of direction in the current. In general the level rises as the current flows in and vice versa, but only in general. Where the current is strong, as in the narrow entrance into a large bay, its momentum often keeps it going after the level has begun to change in the opposite direction. Seeing on the surface the last of an ebb current running out, one is tempted to think that the level is falling, when if one looks closely that level is seen to be rising. It is, as sailors say, swelling underneath.

So with the far more complex currents of historic change: their surface currents may be no guide to what is really happening, still less to what is about to happen. For instance, toward the end of the Sixteenth and early Seventeenth Century Religious Wars, especially during their ghastly climax in the Thirty Years War, discouraged observers might well have said: "Europe is finished. The religious quarrel is so important and the prospect of settling it so remote that civilization must tear itself to pieces." That estimate would have been wholly mistaken. The disgust with religious fanaticism and the cult of moderation which were to combine in the Eighteenth Century humanistic moral unity were growing. The well disciplined and regularly supplied troops of Gustavus Adolphus, the forerunners of the socially harmless Eighteenth Century armies, had begun to show a still incredulous world how war might be waged without greatly harming civilians. In short the coming Eighteenth Century limitation of war was already taking form.

Today if we will not pretend to knowledge of the future but will limit ourselves to what we positively know, we can at least say this: To date, every operation of the present war has been bloodless in comparison with those of twenty odd years ago. Nowhere has any good observer reported a trace of the general enthusiasm characteristic of 1914 and '15. Everywhere the peoples have either shown slackness or have accepted the conflict as a grim and nasty duty. Therefore we may fairly assume that no spirit of sacrifice like that which prolonged the last war will correspondingly prolong this.

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In the early days of September 1939 when hostilities began with Germany on one side and an alliance composed of Poland, France and England on the other, most people expected another opening like that of 1914, together with great air raids against the chief cities of the contestants. The masses had never heard of limited war, and practically all educated people who had read of its historical occurrence thought it a thing of the past. The few specialists who had discussed the idea had hardly been noticed.

For months thereafter everyone talked about limited war. The hordes were duly mobilized, but nowhere did they rush into prolonged and bloody battles like those of a quarter of a century ago. In the east the war was limited in time; the Germans conquered Poland with a single lightning stroke and without appreciable loss to themselves. The Polish casualties, although unknown, can hardly have been more than a fraction of the Polish prisoners taken. In the west the opening phase of the land war was for more than seven months almost farcically limited in intensity. Both sides were content to garrison their huge frontier defences without either party attempting serious attack upon the other. Apparently not a single bomb was dropped on any western city, except for an English aviator who bombed a Danish town by mistake. There was a small war upon the sea, carried on largely by submarines and planes, and that was all.

During this phase political and diplomatic manoeuvring were more important than fighting. The chief contestants mingled

negotiation with arms after a fashion not wholly unlike that which characterized the Eighteenth Century "diplomatic" or "cabinet" wars so much despised by Nineteenth Century military theorists. Already we are far from Foch's formula that in "modern" war one negotiates with the enemy only after having crushed him. The German government timed the announcement of its non-aggression treaty with the Soviets to coincide closely with the opening of hostilities, apparently hoping that that diplomatic victory might relieve it from the necessity of fighting at all. Having conquered Poland, the masters of Germany next made a public offer of peace to France and England. Both before and after the rejection of that offer they steadily worked to detach England from France and to make a separate peace with the latter. German soldiers in entrenched lines facing similar lines of the French are reported to have put up signs reading "If you don't shoot we won't," to which on at least one occasion the French are said to have—very mildly—replied by other signs reading "Post no bills." At least once the German radio played a French popular song "Parlez moi d'amour" ("Talk to me of love"), announcing that this was done at the request of the French and for their entertainment. The same radio steadily addressed itself in French to the French radio audience, urging that the war serves no interests but England's and that the French would be better out of it. In pre-democratic times such propaganda would have been carried on by other means and would have been addressed not to the people of the "hostile" state but to a peace party at the court of that state. The underlying idea, however, is the same.

Meanwhile the English began the war with attempts to detach the German people from their government by dropping propaganda leaflets from airplanes over Germany—incidentally the inaccuracy of aerial navigation is illustrated by the error of an English pilot who dropped his propaganda leaflets some sixty miles inside Danish territory. The idea of Danes being showered with printed matter in German urging all Germans to revolt against Hitler and the Nazis is not without humor. Such an error at the beginning of a war when pilots are supposed to be well trained shows the inaccuracy

of the air weapon. Returning from this digression, the British attempts to persuade the Germans to revolt against Hitler and the National Socialist government do not conflict so sharply with Nineteenth Century theories as does the German idea of punctuating their campaigns with proposals for peace. Both the French Revolutionaries and Napoleon repeatedly tried to detach hostile peoples from their governments, and later the anti-Napoleonic Allies successfully repeated the manoeuvre against the great Corsican. The anti-Hohenzollern propaganda of the Allies of 1914-'18 is still fresh in memory. Nevertheless the recent British incitements to revolution in Germany differ materially from those of 1914-'18, in that the latter were made only after the last great war had gone on for some time, while the present propaganda was begun immediately upon the outbreak of hostilities and was practically unaccompanied by land fighting.

Except in Poland, the chief events of the opening phase of the present conflict took place not on the battlefield but in the council chamber. Originally the measure of support given to Germany by the Soviets was offset by the Italian and Spanish decisions to remain neutral, the United States' repeal of their embargo on the shipment of arms, and the Turkish treaty with France and England. Obviously the future course of great powers like the United States, Italy, the Soviets and Japan would influence the development of the conflict at least as much as the fighting between the original contestants.

Still another difference between 1914-'18 and the opening phase of 1939 was the almost total absence of hate propaganda. One conspicuous exception, the British document published on October 30 concerning tortures alleged to have been inflicted on Jews in German concentration camps, was accompanied by an apologetic statement saying that the British government had hesitated before putting out hate propaganda of any sort. Moreover, insofar as the document may have been intended to rouse the Germans against their government, its effectiveness may be doubted. For example, a country at war with the United States might publish accounts of American atrocities against negroes without affecting American opinion, not because Americans are insensitive to cruelty but because the

stories would be discounted on account of their source, also because many white Americans, especially in the South, rightly or wrongly believe the horrible punishment of an occasional negro rapist or other criminal prevents crimes and disturbances more harmful to the public.

Finally, as we have seen, the mood of all the contestants was and is utterly different from that of 1914.

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The limitation or, if you prefer, the mildness of the opening phase of the present war was especially marked in the actual fighting.

When we speak of "limited" war we really mean "strictly limited," for no war except one ending in the wholesale massacre of the entire defeated group would be ideally unlimited. The term "limited" is therefore only a shorthand phrase. For convenience we may call conflicts which strain the social order of one or both sides absolute or unlimited wars, and those which do not strain it limited wars.

War may be limited in scale, in intensity or in time. If a community makes only a small armed effort compared with its total resources then the conflict is limited in scale. If neither the people of the nation or other war making group, nor the men of the fighting forces furiously hate the enemy; so that the injuries inflicted are not done for their own sake but only for the sake of victory; and if the destruction of life and property be not great, then the struggle is limited in intensity. Should the fighting be soon over, then it is obviously limited in time.

The Polish campaign is as perfect an example of limitation in time as history affords. Within three weeks a nation of more than thirty two million people possessing more than a hundred and fifty thousand square miles of territory, strongly organized for war with an active army of thirty divisions, all of which had been mobilized for more than four months previously, was totally defeated. Indeed most of the heavy work was done in the first ten days, after which the rest of the fighting was not much more than a rapid and brilliant process of mopping up. Cannae and Sedan were on a much smaller scale. Napoleon's

defeat in Russia was a gradual process largely due to the climate. Among all the comparable campaigns in history not one was at once as rapid and as decisive. Moreover the victorious nation, Germany, was at the same time at war in the west with two of the chief powers of the world, France and England.

Like all other campaigns, that in Poland in 1939 was shaped by geography. Almost all Poland is a vast plain, in the central and western part of which the chief military obstacles are the river lines, especially the great river Vistula which flows in a general direction from south to north, rising in the mountainous country along the southern Polish border, and emptying into the Baltic Sea. Very roughly, the western Polish border towards Germany in the late summer of 1939 described a great semi-circle with a radius of about a hundred miles, with the Vistula for the chord of the arc, and the capital, Warsaw, on the Vistula not far from the center of the semi-circle. Thus the Polish troops if strung out in line near the border would find themselves in a convex formation, threatened with envelopment on both flanks by the Germans should the latter succeed in their favorite plan of an enveloping offensive.

In the northwest the roughly semi-circular shape of the frontier was modified by an important exception: a narrow tongue or corridor of Polish land here extended to the Baltic, separating East Prussia from the rest of Germany. If the Poles could hold the western side of this corridor against German forces advancing from the west, they could then use the corridor's eastern side as a base for an enveloping attack into East Prussia. On the other hand the narrowness of the corridor would imperil any Polish troops stationed therein, since a short advance by the Germans from either side across the neck of this corridor would cut the communications of those Polish troops and would isolate them.

Both sides planned an offensive campaign; the original disposition of the Polish forces admits of no other explanation. They were organized in three Field Armies of unequal strength. The strongest stood in the center near the tip of the western salient of the frontier. The second strongest group was on the right or northern flank, occupying the corridor in consid-

erable force and facing the southern border of East Prussia. The third group on the Polish left or southern flank, facing the German province of Silesia and the territory of Germany's dependent ally Slovakia, was the weakest of the three.

In view of the great distances involved, the Polish Army had been trained for a war of movement and manoeuvre. Poverty had restricted the possible extent of fortification, and few defensive works had been built except on the short seacoast. Poverty, the scarcity of motor transport and especially of good motor roads, together with the abundance of horses available, had also dictated reliance upon horse transport. There was a high proportion of cavalry, equivalent to seven cavalry divisions as against their thirty infantry divisions.

If the above seems reasonable enough, on the other hand Polish training had concentrated on offensive tactics to an extent which seems strange in view of the strength of her German neighbor. Even stranger was the Polish belief that mounted cavalry charges were still possible in the teeth of Twentieth Century fire power.

The Polish decision to concentrate far forward in preparation for attacking eastern Germany was justifiable only on the assumption that much if not most of the German strength would be pinned in the west by the French.

Instead the Germans threw the greater part of their strength against Poland. They knew that the British had prepared only a small Expeditionary Force, and they judged a prompt and vigorous French attack upon their fortified western frontier unlikely. Should such an attack come they trusted in the power of a modern defensive and especially in the strength of their fortified western zone to resist even when lightly garrisoned. Consequently they realized a great "economy of force" by manning their western defensive works only with their older classes, behind whom stood no more than a handful of active divisions available for counter-attack. Probably about ten to twelve divisions were so placed, leaving between fifty and seventy German divisions available against the Poles.

Against the thirty Polish infantry divisions this superiority of force, together with the shape of the frontier and the complete failure of the Polish Command to estimate the situation

correctly, set the stage for a crushing defeat of the Polish Army.

On the other hand it was by no means certain how heavily the Germans might lose in inflicting such a defeat, or how long it might take them to win. The Poles are brave and intensely patriotic. Although they lacked equipment sufficient to arm all their trained reserves, nevertheless they had been fully conscript for nearly twenty years. Consequently their numbers would be substantially increased by reservists if the struggle were prolonged, while Germany had been conscript only since 1935. Moreover a long campaign in Poland might well bring the French and the small but well trained British Expeditionary Force into action against the Germans in the west. The sooner a decision could be achieved against the Poles, the sooner the risks which the Germans were running in the west could be ended. As in 1914, time was essential.

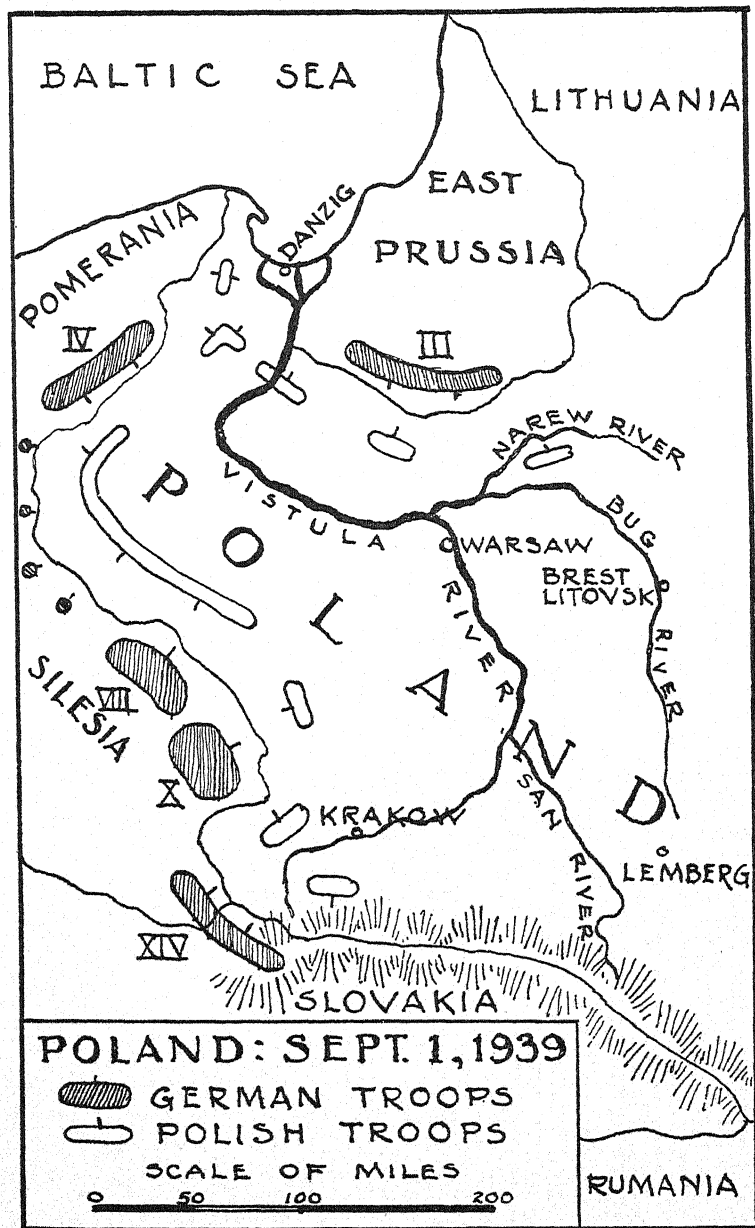
The Germans planned to make their invasion of Poland a "blitzkrieg" or lightning war.

The outline or in theatrical terms the scenario of such an operation had been sketched by Von Seeckt in his "Thoughts Of A Soldier" of which the English translation was published as long ago as 1930 and from which the essential passages are quoted in the last chapter. That scenario called for three acts. In the first of these the Air Force was to star, putting the hostile Air Force out of action and then attacking the enemy's communications in order to hinder his movements and especially the mobilization of his reserves. The planes were not to try to win the war by itself in Douhet's fashion but were primarily to assist the advance of the ground troops. The climax of the scheme was to be the second act consisting of an extremely rapid advance by all immediately available ground troops, that is by the active or Regular Army without waiting for the incorporation of reserves. This advance if successful would largely prevent the organization of the enemy's reserves and especially would prevent his forming continuous entrenched fronts. The masses of reservists, the essence of the armed horde, would thus be relegated to the third act which was intended only to be an epilogue or anti-climax. Those of the winning side would be needed only for garrison or police duty

in the territories already conquered by the Regulars, while few of those on the losing side would be able to get into action at all.

This scheme was now to be followed to the letter. Well over two thousand planes, amounting to more than two thirds of Germany's air strength, were to participate in the air attack. The men of the Air Force, being professionals, were immediately available. The ground army which was to achieve the decision was also almost all professional. The one component of the active divisions which was not always fully present in peace, that is the divisional supply trains, had been brought to full strength in July. Although about August 1 the creation of reserve divisions had been begun, and by September 1 at least ten of these divisions were fully formed and ready to operate, nevertheless only a small part of the cadres of the active divisions had been assigned to the new formations. Only two of the latter are known to have been engaged against the Poles from the beginning, and only three others are known to have appeared in the course of the fighting.

A new thing in war was the appearance of the German Armored Divisions which were built around their tanks. Nine of these Divisions existed, all but one or two of which were about to go into action against the Poles. Each consisted of three elements, or in military slang "echelons": a scouting or reconnaissance echelon of fifty armored cars and a motor-cycle infantry company with its usual supporting weapons, a shock echelon consisting of about four hundred and fifty tanks, and a fully motorized ground-holding echelon including two infantry battalions, a motor-cycle battalion, and an artillery regiment, together with engineer, anti-tank and signal units. These powerful mechanized divisions require a high proportion of technical troops, field engineers to build or improve roads and bridges, and repair men to keep their highly specialized vehicles in service—much as a fully armored Medieval knight always required two armed and mounted servants, one to take charge of his armor and to help him on and off with it, the other to care for the four horses of the group, he himself having both a heavy charger and a smaller beast which he habitually rode when not expecting action. In both cases the principle



is the same: a specialized fighting unit requires maintenance on a large scale.

By contrast with the dispositions or strategic deployment of the Poles with their weak southern wing, their strong but awkwardly placed northern wing and their especially strong center, the Germans had two strong wings and almost no center. Taking advantage of the shape of the frontier and the offensive dispositions of the Poles, they planned to envelop the latter on both flanks by a concentric advance.

This was in the full tradition of their national strategy, especially as this had been worked out by Von Schlieffen. The latter had based his theory on the battle of Cannae at which in 216 B.C. Hannibal had destroyed a Roman army stronger than his own by just such a double envelopment. The reader will remember that Von Schlieffen's plan, a mutilated version of which was put in practice by the younger Von Moltke in 1914, had been based on enveloping the northern French flank.

Against Poland in the autumn of 1939 the northern German wing included two Field Armies, the Third in East Prussia and the Fourth in Pomerania just west of the corridor. The main effort however was to be made by a southern wing which included three Field Armies. On the extreme right was the Fourteenth, including certain Slovakian divisions and in part based upon Slovakian territory. Next to it the Tenth was intended to deliver the principal German thrust. On the left of the Tenth stood the Eighth. The German center consisted only of a fortified line of no great strength manned by a few frontier guards and formations of older reservists, it being expected that the power and speed of the German wings would compel the strong Polish center to retreat promptly in order to avoid being cut off. As an aid to the rapidity of the operation the Field Army Commanders were all comparatively young, not one of them being over fifty four. In addition the Commander of the Tenth Field Army, Von Reichenau, was a well known athlete called "The Bull."

For the moment the Armored Divisions were held far back in order to exploit a break-through.

On September 1 the German Air and Ground Forces struck

simultaneously without a Declaration of War. Beginning at dawn, for five days the German planes attacked chiefly the Polish air fields and railways. In spite of many warnings and even recommendations of such a treacherous attack by Douhet and other theorists, such anti-aircraft defence as the Poles possessed seems to have been surprised. Many if not most of the Polish planes were destroyed on the ground, and the ground organization of the Polish Air Force was so battered that, in Douhet's phrase, that Force became incapable of any appreciable operation of aerial war. In attacking the Polish railway net the German Air Commanders, remembering the invariable failure of the bombers of the last war to inflict serious damage on the lines themselves—tracks, road-bed, bridges, etc.—directed much of their attention to the rolling stock which is far more vulnerable. By this method the Polish railways, on which the Poles almost exclusively relied for strategic movement because of their lack of good roads, were paralyzed throughout most of the country so that the original error in the placing of the Polish Armies could not be corrected. At the same time the German airmen greatly aided the German ground operations by reconnaissance work and dive-bombing against Polish troops, but these activities, however useful, were secondary to the destruction of the Polish Air Force and railroad net. How far the German Air Force, in addition to its activity against military objectives, also sought to spread terror among the Polish civil population is not certain. There are many stories of its having done so, and the Prussian military tradition is not without instances of deliberate "frightfulness" of this sort, for instance in the massacre of Belgian civilians at Dinant in 1914. As yet however there is no certainty as to the extent of German air "frightfulness."

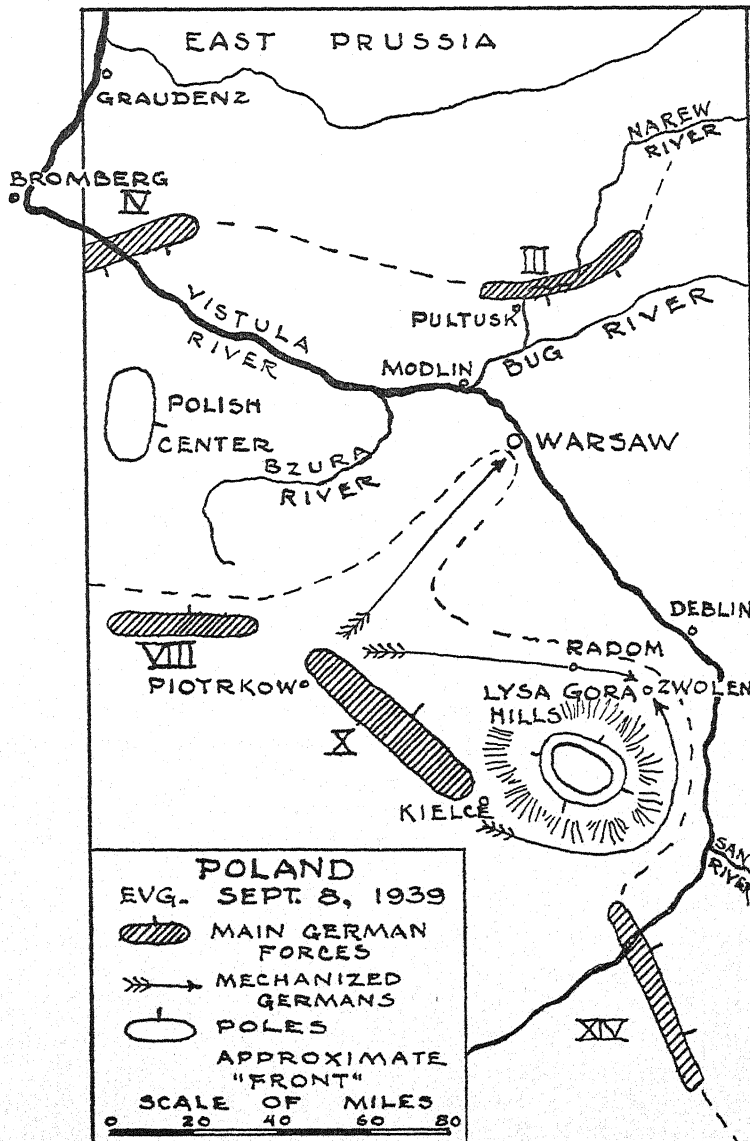
Meanwhile the German infantry were everywhere advancing at top speed, making eight or ten miles a day which would not have been bad marching for such large units even in peace time. The first notable success of the German method of double envelopment was the cutting of the corridor which was done by the Fourth Field Army advancing southeast from Pomerania, with the assistance of certain units of the Third Field Army operating from East Prussia. By the evening of September 2

mechanized Pomeranian advance guards had reached the west bank of the lower Vistula near its westward bend. On September 3 a weak East Prussian force broke through the ring forts of the obsolescent fortress of Graudenz and occupied the city next day. Bromberg fell to the Pomeranians on the 5th. To anticipate events, between September 6 to 9 from forty to fifty thousand Polish troops, isolated and trapped in the middle part of the corridor, found themselves forced to surrender for want of food and ammunition.

In the far south the Fourteenth German Field Army with its Slovakian supports outflanked and took the rich industrial region of Polish upper Silesia almost without firing a shot, thus capturing the mines and factories of the district intact. Since most of the local Polish troops retreated not east but northeast, the Fourteenth Army could then advance eastward against negligible opposition. Until mid-September therefore its movements are interesting only because of their extreme rapidity.

On the left of the Fourteenth Army Von Reichenau's strong Tenth Army was also making good speed. At first the northeasterly retreat of the weak Polish southern wing, although rapid, was not disorderly, but by September 6 a gap began to appear around Piotrkow, whence one of the few good roads in Poland runs northeast toward Warsaw more than eighty miles away. A mechanized force of one or more Armored German Divisions had been brought up in close reserve to take advantage of just such an opportunity, and on the morning of September 7 this force was sent up the Piotrkow-Warsaw road. By the evening of the next day some of its advanced elements were actually in the suburbs of the Polish capital. So swift a dash had never been seen in the history of war.

This charge transformed the campaign by preparing one side of the pincers for a great double envelopment. Of course such small numbers could make no attempt against a great city of over a million people, the importance of the stroke was that, if the strip or narrow wedge of land thus gained could be held, the strong Polish center group and all other Polish troops west of the Vistula would be cut off from direct retreat on the capital along the left bank of the great river. For this purpose the natural line for the Germans, now locally facing west, to hold



would be the river Bzura which flows northeastward, emptying into the Vistula some thirty odd miles below Warsaw; and to the line of the Bzura the German Eighth Army, which had been covering Von Reichenau's left and conforming to his movements, now rushed motorized and horse-drawn Infantry Division to form a defensive front. No Polish striking force capable of offensive action against the head of the new German salient existed near Warsaw.

Had the northern group of German Armies not also advanced rapidly, then a part of the Polish center might have perhaps succeeded in retreating to Warsaw by crossing the Vistula below the mouth of the Bzura and then marching up the right bank of the Vistula. The crossing however would have been difficult in the teeth of the German Air Force, and in the event the northern German group was preparing a second claw for the great pincers of which the first claw had been so brilliantly thrust forward by Von Reichenau.

Both the Third and the Fourth German Field Armies were quickly moving forward. After cutting the corridor, the greater part of the Fourth or Pomeranian Army had crossed to the east bank of the Vistula and was moving southeastward toward Warsaw. By the evening of September 12 advanced elements of the left of the Pomeranians were approaching the right bank of the Vistula opposite the mouth of the Bzura. The pincers had closed. To change the metaphor, it was as if a gigantic net had been thrown around the Polish center, together with those parts of the Polish wings which had been cut off and driven in upon that center. After the first German success in cutting off the corridor, a second and much greater double envelopment had been completed; and if the trapped Poles could not break through the new German barrier so quickly thrust in behind them, they were lost. Thus the invaders, although as regarded the campaign in general they were on the offensive, were here able tactically to stand on the defensive in the actual fighting and avail themselves of the strength of a modern defensive against the locally superior numbers of the Poles. The technical skill of the manoeuvre speaks for itself.

This meeting of the pincers of the first and great German

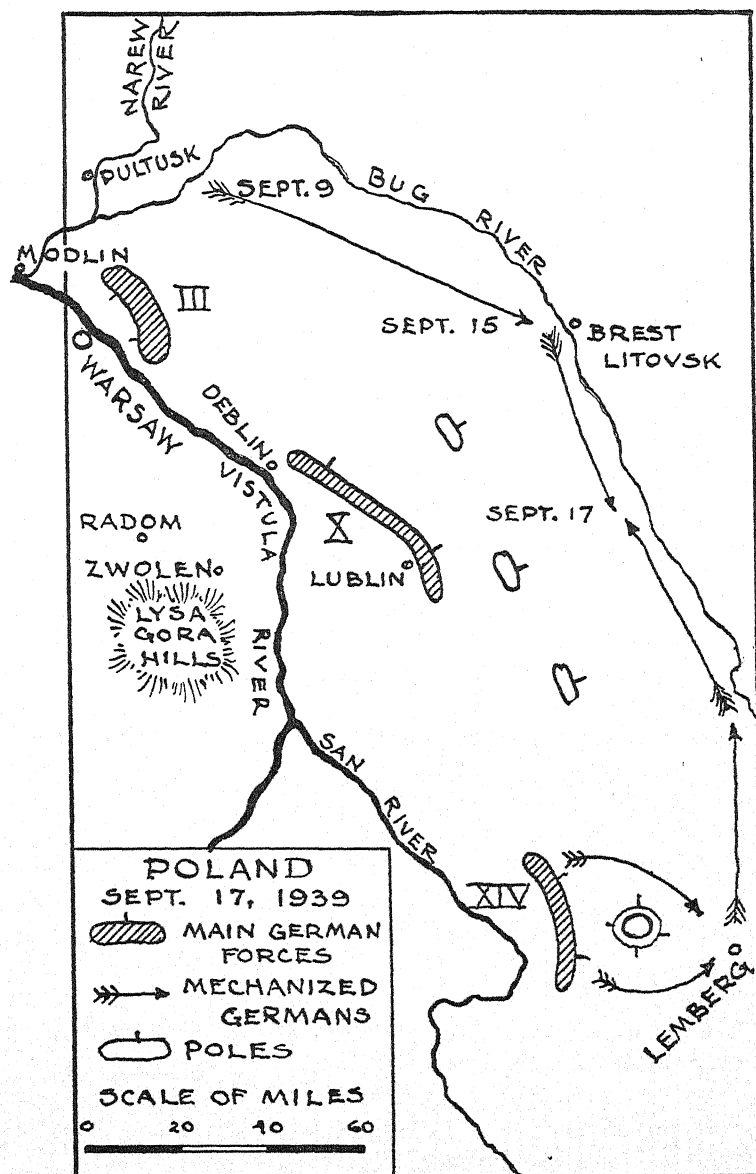
double envelopment repeated on a greater scale the striking success achieved by the same manoeuvre in the corridor. To anticipate events for the sake of clearness, the greater part of the strong Polish center group which had been advanced so far to the west dashed itself to pieces against the hastily formed German line behind the Bzura which had resulted from the lightning thrust from the southwest to the Warsaw suburbs. Here the heaviest fighting of the campaign took place. Only a few of the Polish units succeeded in breaking through to Warsaw. By September 18 the greater part of the Polish center, after the failure of most of its fierce and repeated attacks, had begun to disintegrate. By the 20th its resistance had ceased, and a hundred and seventy thousand Poles with three hundred guns and forty tanks had surrendered.

Before the Polish attacks along the Bzura had reached their climax and a full week before their end, two other German mechanized dashes in the south had obtained a third considerable success by double envelopment. By the morning of September 9, some hours after the first mechanized German charge had touched the suburbs of the Polish capital, the left or southern Polish Field Army in Von Reichenau's front was already widely scattered. Some of its divisions had succeeded in retreating eastward to a temporary safety behind the Vistula in the fortified area of Deblin, better known by its Russian name of Ivangorod. Others on the right of the southern Polish group, cut off by the first mechanized attack, had retreated northward and joined the Polish center which was about to begin its ill fated attacks against the Bzura line. Most of the southern Polish Field Army however was in a hilly region known as the Lysa Gora, east of Kielce, south of Radom and west of the Vistula. The reader will have noted that not all, perhaps only one, of Von Reichenau's Armored Divisions had been used in the direction of Warsaw. A second mechanized force, again composed of one or more Armored Divisions, speeding eastward from Piotrkow, turned the right or northern flank of the Lysa Gora position. First taking Radom, by the evening of September 9 they had reached Zwolen eighty miles east of their starting point and in the right rear of their enemies. Here they were joined by a third mechanized German force which had made

another astonishing advance, first rushing eastward from Kielce to the west bank of the Vistula and thence moved rapidly northward, covering more than a hundred and twenty miles. The Armored Units which achieved this third double envelopment made no attempt to rush the Polish units thus trapped in the Lysa Gora hills, these units being doubtless provided with adequate artillery and especially with anti-tank guns. Instead the mechanized troops were content to bar their retreat until German infantry divisions came up. Again anticipating events, by September 13 this major part of the original Polish southern Field Army had been destroyed, some sixty thousand men with forty three guns and thirty eight tanks having surrendered in the Lysa Gora.

Meanwhile on the outer flanks of the fighting front the Third German Field Army operating from East Prussia and the Fourteenth Field Army in the far south had been jointly preparing a fourth double envelopment further to the east and even wider than that of which the pincers, meeting west of Warsaw, had cut off the strong Polish center.

At the opening of the campaign the Third German Field Army in East Prussia, which as we have seen had sent one Division westward against Graudenz, had advanced southward toward Warsaw. In consonance with the general enveloping strategy employed, its mission was not to make a direct attack upon Warsaw and the fortress of Modlin, which the Russians call Novo Georgiesk, at the mouth of the Bug river some twenty miles down the Vistula from the capital. Its first assignment was to cut off these two points from eastern Poland. On September 6 the East Prussians reached the first serious obstacle to their southward advance, the Narew river which in the lower part of its course flows from northeast to southwest, emptying into the Bug not far above the mouth of the latter. The Poles had fortified the Narew with a line of pill boxes, and here on September 7 and 8, while Von Reichenau's first Mechanized Force was flashing northeastward toward Warsaw, heavy fighting took place. On the 9th, however, the Germans forced crossings at Pultusk and to the eastward of that town, and by the evening of that day certain mechanized elements had not only reached the river Bug but had established several



bridge-heads on its southern bank. There being no other defensive line covering the northeastern suburbs of Warsaw against attack from the north and east, the complete investment of that capital was only a matter of time.

By September 10 the campaign was virtually decided. The bulk of the Polish forces, harassed from the air and bewildered by the lightning strokes which had repeatedly placed the invaders in the rear of their luckless victims, were already so compromised that only a miracle could have restored the situation. What remained was not much more than mopping up. Nevertheless the Germans did not slacken their efforts. The end of their Lightning War was marked by feats of arms as brilliant as those of its beginning.

Here we may review the position which existed on September 10, the day after the Third German Field Army on the extreme German left had fought its way across both the Narew and the lower Bug. On the right of the Third, the Fourth Field Army was advancing its left toward Modlin-Novo Georgiesk and the mouth of the Bug in order to complete the cutting off of the Polish center. Except for an isolated detachment on the Baltic coast the Polish troops in the corridor had already surrendered. The German center screen was cautiously following the rear of the Polish center as the latter moved eastward to attack the Bzura line. The Eighth Army was hastily strengthening this line which it was about to hold successfully. The Tenth Army under Von Reichenau had succeeded in surrounding the Poles in the Lysa Gora hills by means of its mechanized forces, and was advancing its Infantry Divisions which were presently to obtain the surrender of the surrounded units. On the extreme German right in the far south the Fourteenth Army, advancing against negligible opposition, was approaching the San river. The Polish troops near Warsaw, incapable of offensive action, were about to be surrounded in the capital. There was however a center of Polish resistance around Lublin, to which town certain active divisions of the original left or southern Field Army had retreated and had there been joined by certain Reserve Divisions.

The reader will have noted the smallness of the part played in the campaign by Polish Reservists. Although these last

amounted to well over a million trained men—about thrice the strength of the active Polish Army—the first two acts of Von Seeckt's scenario had been played so successfully that few of them managed to get into action at all.

While the Field Army of the original Polish center was battering in vain against the Bzura line, the last German operations east of the Vistula were directed against the Polish Lublin group which was about to be caught by the fourth and final double envelopment of the campaign. From the west Von Richenau's Tenth German Army advanced directly against this group, thrusting out mechanized elements in the attempt to turn both its flanks. The Poles therefore retreated eastward toward the middle Bug. Meanwhile, however, the Third German Field Army from East Prussia, which had established bridge-heads south of the lower Bug on September 9, was pushing forward still another far-reaching mechanized thrust. East Prussian Armored Units—charging southeastward virtually unopposed, for the Polish local resistance had collapsed—reached the fortress of Brest Litovsk, a hundred miles away, on September 14. Here they turned southward, advancing up the right or eastern bank of the Bug. At the same time the Fourteenth Field Army, also virtually unopposed, had been moving rapidly eastward across southern Poland behind two Armored Divisions which had been outdistancing the infantry. On September 15, the day after the mechanized East Prussians had arrived at Brest Litovsk, the Fourteenth Army's mechanized advance guards were in the suburbs of Lemberg the chief city of southeastern Poland. From Lemberg they turned north, and on the 17th, after a final great bound of about a hundred and fifteen miles, their leading reconnaissance elements touched hands with similar elements of the Third Field Army at a point near the Bug and about forty miles south of Brest. Although the resulting chain of posts along the Bug was thin, nevertheless the fourth and widest of the German double envelopments was now completed.

On the same day, September 17, Soviet Russian troops invaded Eastern Poland, cynically alleging a pretended breakdown of public order there which made it necessary for them to come to the aid of the population!

Such detachments of the Polish Lublin group as escaped eastward through the German cordon on the Bug fell to the Russians. By September 21, the day after the surrender of the original Polish center west of the Bzura, over a hundred thousand officers and men of the original Polish left or Southern Field Army had also surrendered in a number of separate capitulations. On the 28th Warsaw, where a considerable part of the defence had been civilian, gave up the unequal struggle, about a hundred thousand soldiers laying down their arms. Next day the fortress of Modlin with thirty thousand followed suit. On October 2 the last regular Polish resistance ceased when the garrison of certain sea-coast fortifications at the Baltic end of the corridor which had not been attacked finally yielded.

If the Germans shelled and bombed Warsaw as they are reported to have done, then it is hard to find military justification for their action inasmuch as the place must soon have surrendered from hunger and from interference with its supply of drinking water. They may have thought that they were hastening the city's fall so that they might sooner return to the west, or—in some clumsy way—that they were revenging upon the people of Warsaw the injuries inflicted upon themselves in the guerilla warfare waged by the Polish civilians further to the west. Again, it may have been a mere attempt to strike terror, or a pointless crime of a sort not unknown to military history. We may instance the "booby traps" set by the Germans in their retreat in 1918, which killed a few Allied soldiers but could not possibly have affected the course of the war.

At all events, the German losses in Poland were small. As against nearly three quarters of a million Polish prisoners, they admitted only ten thousand Germans killed, thirty thousand wounded, and somewhat over three thousand missing. Even if, allowing generously for understatement, we multiply these admitted losses by three, four, or even five, still the figures will remain insignificant. Also the Polish casualties, however great, can hardly have been more than a fraction of those which would have been incurred in an intense and prolonged war between armies of such a size. Except for what they may have done at Warsaw, in almost every case the German ground

forces won not by pounding but by swift manoeuvres which bewildered and confused their enemies.

The lightning war of September 1939 was economical of blood.

* * * *

During the German conquest of Poland the French and British made no attempt to aid their Eastern Ally. They might have given direct aid by air; some journalists prophesied "shuttle raids" by planes flying from France or England across Germany to Poland and then flying back again. Perhaps the Polish Air Fields were too much knocked about to make such operations practicable after the first few hours, although that seems unlikely. Perhaps their relative numerical weakness in the air, together with the peculiar vulnerability of England to air attack and the desire to conciliate neutral opinion by not being the first to bomb civilians, made the Western Allies hesitate. In any case not one French or British plane is reported to have flown to Poland.

Again, the French Army might have made a diversion in favor of the Poles by attacking the lightly garrisoned German fortified zone in the west while most of the German Army was in the east. The French covering forces would have been immediately available for such a stroke. Nothing of the sort was done. General Gamelin, the French Commander-In-Chief, is reported to have said that he was not going to begin this war with another Verdun. The Army under his command moved cautiously forward to the advanced German line of resistance, skirmishing with the German outposts, but did not attack. French officers were repeatedly quoted as saying that France would be not only economical of life but avaricious of it.

The present writer has no intention either to blame or to praise this strategy in these pages. Although one might argue with some force that the fate of Poland will be decided not on the Vistula but in the West, such argument would be irrelevant to our present purpose. The offensive spirit of the French Army may have been high or low, the decision not to attack may have been wise or unwise; at the moment such questions do not concern us. Our subject is the descending curve of war,

and of that one could hardly find a better illustration than Gamelin's cautious opening.

One may compare either the opening moves of 1914—the French and German Armies both charging forward in headlong offensives while the Czar's troops deliberately and chivalrously sacrificed themselves by rushing into East Prussia although the slow mobilization of their immense host had hardly begun—or the trench-to-trench attacks in which through 1915, '16 and '17 the armies laboriously battered at each other, tearing up the ground with millions of dollars worth of shells and then pouring out rivers of blood for the conquest of insignificant fragments of tortured earth. Such things might have happened on another planet.

Even the later attacks of the last war, beginning with Cambrai, although here and there they show a glimmer of resemblance to the German Lightning War in Poland, differ from the campaign of '39 in the West as night differs from day. One might compare their few points of likeness to the recent Polish campaign to lightning flashes seen at night and so far away as to be hardly visible.

Nor were the Germans of '39 more hasty than the French to plunge into Western offensives. The subsequent events of the opening phase on the Western Front may be briefly summarized. In the latter half of October the French between Luxemburg and the Rhine retreated from the narrow belt of German territory in front of the first line of German fortifications to which they had cautiously advanced. The obvious reason for their retirement was the end of the fighting in Poland and the consequent freedom of the Germans to shift their strength westward. With a population of only forty millions, about half that of their enemies, the French preferred to await a possible attack in the long prepared fortifications of the Maginot Line. Meanwhile delay would permit the increase of British numbers—a British contingent was already in France—and would give the Allied blockade time to make itself felt. On their side the Germans followed up the retreat of the French with an advance as cautious as the original advance of the latter. For the time being they too were content to wait. Except for occasional artillery fire and shots exchanged between

ground and air patrols there was no fighting on or over the land.

In only two respects did the almost wholly passive Western campaign of 1939, if indeed it can be called a campaign, resemble the last great struggle: first the immobility on the map was like that of 1915, '16 and '17; second the armed hordes were mobilized. Since the immobility of '39 was of a different sort, resulting from the deliberate refusal of both sides to attack, while that of nearly a quarter of a century ago resulted from the failure of violent but futile efforts, this similarity is more superficial than real. Thus we are left with only one basic factor common to the two land wars: the hordes.

Here again it would be easy to point out differences. The French twice demobilized considerable numbers, sending home subject to call all conscripts over forty nine and all fathers of two or more children. By itself the first installment of released men was estimated at a hundred thousand. The reason is clear: the strengthening of the fortified lines permitted them to be held with fewer men, so that the forces still available for defence and counter-attack were thought ample. With conscription in force from the beginning in Britain, the organization of the British mass army could go forward more systematically than in '14-'18. On the other hand, that organization was deliberate. Notwithstanding the belief—undoubtedly shared by both the French and British leaders—in the strength of the French fortifications, the Allied commands might have done well to remember the sour joke current in 1915 that Germany would fight to the last German and England would fight to the last Frenchman. In the line itself the total absence of heavy fighting reduced both the strain on the average soldier and on the community which supported him. Few munitions were consumed, almost no lives lost. Accordingly both manufacturing and mourning were less intense. What remained was the strain upon the soldier of being under arms near his enemies, the strain of mass mobilization on the community, and the fear of the future.

The absence of air raids on western cities was as striking as the absence of serious fighting on the ground. In a less grave matter the contrast between prediction and fulfilment

would have been funny. According to many prophets the outbreak of any great war would begin with the instant wreaking of horrible devastation from the air upon the respective capitals. Nothing of the sort happened. The precautions taken against raids—the covering of all lights and the wholesale evacuations from the great towns—caused considerable inconvenience and disturbance of the ordinary course of civilian life, especially in England, but for months the effectiveness of those precautions was not tested.

Being complete reversals of popular expectation, the inactivity on the Western Front and the absence of air raids on cities throughout the opening phase of the present struggle bewildered and amazed people everywhere. In the spirit of Foch's contemptuous dismissal of the Eighteenth Century wars, many derided the conflict as a false or sham war. The same line of thought was followed by those who, in the American vernacular, called it a "false" or "phoney" war. One widely read American magazine, *Father Coughlin's "Social Justice,"* suggested that the French and British were waiting for the United States to come in before making it a real war! A distinguished French writer, Henri Bidou, mildly characterized it as "a war of small incidents" (*"une guerre anecdotique"*). In England some wit, playing upon the name of the Boer War, baptized that of '39 as "the bore war." On November 29, 1939, Chamberlain, then British Prime Minister, publicly spoke of it as "this strangest of all wars."

We may compare two cartoons representing Bairnsfather's famous character "Old Bill." In the first, by Bairnsfather himself and dating from twenty odd years ago, Old Bill is seen miserably crouching with a companion in a shell-hole amid a storm of steel and high explosives and saying to that companion "If you knows of a better 'ole, go to it." A recent American drawing is called "Old Bill Finds A Better 'Ole." The scene is a domical turret reminiscent of those of the Maginot Line. Although shells are bursting outside, Old Bill and another soldier are indifferent to them, for they are seated safely and comfortably in the well lighted interior of the turret. The breech of a cannon projects into their apartment but on

the wall is a picture of a dancing girl, and there is a radio with which Bill's comrade is tuning in on sporting events. Bill himself lounges in an armchair reading a magazine. With due allowance for humorous exaggeration, the contrast between the beginning of the last war and that of this is accurate enough.

Occasional writers began to use the term "limited war." Not all wars, as they reminded their readers, have been full of battles. Some recalled the saying of Clausewitz, the great founder of the theory of "unlimited" or "absolute" war, that since this sort of war has so seldom been approached in history one should distinguish between absolute and real war.

* * * *

In the light of this still more or less novel and unfamiliar idea, let us ask two questions. Had the unexpected mildness of the opening phase of the present conflict continued, would it have amounted to a strict and genuine limitation of war? If not, then might the small quantity of blood shed in Poland, together with the almost total absence of blood for months in the West, at least indicate that such a limitation of war may be on its way?

The partial nature of our inquiry is self evident. We can consider only the beginning of a play on which the curtain has not fallen, and the latter parts of the performance may differ greatly from the prologue. The New York Times on December 4, 1939, printed the following passage: "They lift the hand to strike, they wing the instrument of death, but a mysterious power averts the stroke, or blunts the edge, or deadens the blow. Are they in earnest, or are they playing at war, or dreaming that they strike, and still strike not? It sounds more like a dangerous game than a sad reality." Although these words seem to fit the autumn of 1939 so closely, they were in fact quoted from the London Times of April 27, 1861 in reference to the beginning of the American Civil War, which was to prove one of the bloodiest in history. Within three months of their original publication Bull Run had been fought, after which fiercely contested battles followed each other until the spring of '65. So from the outbreak of war in '39 it was obvi-

ously possible—most observers thought it probable—that the conflict then begun would turn into a far more ferocious affair.

* * * *

The body of our narrative ends with the year '39. With the spring of the present year 1940 detailed information, somewhat uncertain since the beginning of hostilities last September, became not only scanty but often contradictory. Nevertheless the outline of events during the spring and early summer is already clear enough to warrant their brief discussion in an epilogue.

The reader will remember how the technical excellence of the German operations in Poland was accompanied, and presumably their success furthered, by the moral baseness of attacking without a declaration of war. In other words Germany under her National Socialist government achieved what may be called "political surprise." A second method of political preparation is said to have been the systematic use of German sympathizers within Poland to disorganize that country. Neither practice is new: in 1904 the Japanese sank two Russian cruisers without warning by "political surprise," while the French Revolution tried to disorganize opponents from within, and the Russian Revolution of our own day has followed suit. The old fashioned name for both practices is treachery.

In the operations of the early spring and summer of 1940 there appeared the same combination of technical excellence with moral baseness.

In connection with the Polish campaign the German invasion of Norway can hardly be described except in terms of an Irish Bull—the two were so alike and yet so different. Norwegian circumstances were as unlike those of Poland as they could be, yet the German Command, using the same general principles of lightning war, were able to adapt those principles to the problem in hand and gain a second striking success.

Almost all Norway consists of a deeply indented, mountainous, and thinly peopled coast. For centuries there had been no serious fighting there. The troops were hardly more than ill-trained militia, and most of the people, although famous for their daring seamanship, had little fighting spirit. On the other

hand, the country, being accessible by sea, was not cut off from French and British aid as Poland had been.

As in Poland, the Germans began by a treacherous attack. This time, however, the first blow, on April 9th, was struck by a combination of planes, surface warships accompanying troop transports, and soldiers smuggled into Norwegian ports in the holds of seemingly peaceful German merchant ships. Overnight Oslo the capital, the principal harbors, and all the airports, together with the headquarters of five out of the six divisions of the Norwegian army, were seized. The original German forces were extremely small. A week later "some officials" in Washington publicly estimated them at only eighteen thousand, about half in Oslo and the rest in tiny, isolated packets, widely scattered and in most cases cut off from all support except by air. Nevertheless, the Norwegian resistance was so feeble that the few invaders were able to paralyze the whole country except in the far north around Narvik. A handful of Germans in four motor buses is said to have chased the aged King of Norway far into the interior, and missed capturing him only thanks to some peasants who barricaded the road by upsetting wagons. Most of the Norwegian reservists did not answer the call to the colors, as is shown by the high proportion of officers to enlisted men in the various German bags of prisoners. The blowing up of roads and bridges would have greatly hampered the ground operations of the invaders, but very little demolition seems to have been done. Small Franco-British expeditionary forces which landed in central Norway and pushed forward advanced elements, in one case over a hundred miles up country toward Oslo, were roughly handled from the air and then threatened with envelopment by mechanized German detachments which raced over the snow-covered Norwegian mountain passes at the same astonishing speed as across the Polish plain. Consequently, the French and British hastily reembarked on May 3. At this time the total German numbers in Norway may have increased to a hundred and thirty thousand. Everywhere the German air transport seems to have been skilfully managed. Only in the far north around Narvik were the Allies able to get the upper hand until the Norwegian surrender in June, and even there the German re-

sistance was stubborn. The Germans have since admitted losses—here reduced to the nearest thousand—of 1000 killed, 2000 wounded, and 2000 missing.

As a sort of *hors-d'oeuvre* to their invasion of Norway the Germans almost bloodlessly occupied Denmark. There the only resistance seems to have been made by the ceremonial troops of the Palace Guard in Copenhagen, whose ornate uniforms and naïve desire to be photographed have amused visitors to that city. Apparently this handful of "toy soldiers" maintained the honor of their country and their corps by fighting very gallantly and suffered heavy losses.

A month after the Scandinavian attack, it was dwarfed by a third German lightning campaign in Holland, Belgium, and France. According to traditional morals, German baseness reached a climax in regard to the first two countries, inasmuch as the National Socialist government had publicly promised to respect their territory only about ten days before it was invaded. A pretext was given to the effect that the Dutch and Belgian authorities had agreed to the use of their territory as a base for a forthcoming Anglo-French attack of the German industrial region of the Ruhr, but since this statement conflicts with the notorious unwillingness of the Dutch and Belgians even to discuss with the Anglo-French Staffs the methods of joint resistance if the Germans should violate their neutrality, it is difficult to find the German statement convincing. In Norway German action had had at least a somewhat better excuse, in that the British Admiralty had previously announced the unneutral act of laying mine fields in certain Norwegian territorial waters.

Speaking in the German Parliament on August 4, 1914, the German Chancellor von Bethmann Hollweg had been more candid as follows: "Gentlemen, this is a breach of international law. . . . The wrong—I speak openly—the wrong we thereby commit we will try to make good as soon as our military aims have been attained."

The attack on Holland and Belgium began May 10. After losses which have been most variously stated, the Dutch army surrendered on May 14. The casualties among Dutch soldiers were finally announced as only about three thousand killed,

seven thousand wounded, and "several" thousand missing. Like the Norwegian troops, the Dutch army had always been considered little better than militia.

Although the Belgian army was a much more serious force on which much time and money had been spent since 1918—one third of its peace strength having been long service professionals, it surrendered on May 28. Most of the Belgian planes were surprised and destroyed on the ground as those of the Poles had been and, as in Poland, German air superiority played a great part throughout most of the operation. The German advance into Belgium was two pronged. The main effort was made across the difficult hilly region of the Ardennes in the southeastern corner of the country. Since the beginning of record no major offensive had ever crossed these wooded hills which were now supposed to be defended by specially trained Belgian units, but the Germans raced across them, reaching Sedan on the Meuse on May 17 and breaking the French "little Maginot Line" there on that day. The choice of the Ardennes accorded with the familiar military maxim: "That which appears hazardous but really is not, is nearly always wise." Meanwhile in northeastern Belgium a bridge across the important obstacle of the Albert Canal was left undestroyed either through treachery or, more probably, through some individual piece of incompetence. Across this bridge the Germans poured. Considerable Allied numbers, including the little British Expeditionary Force and a large proportion of the comparatively small French Tank Corps, had advanced west and north of the Ardennes in support of the Belgians when, following the German crossing of the Meuse at Sedan, the center of the new French front was broken through. Using about eight of their Armored Divisions and acting with the same lightning speed which had characterized their mechanized thrusts in Poland, the Germans pushed forward a narrow but deep salient westward toward the Sea. Racing almost unopposed through the virtually undefended rear areas of the astonished Allies, their motorcycle advance guards reached tidewater at Abbeville on the estuary of the Somme river on May 21. The Allies attempted the obvious strategy of reuniting their forces and at the same time trapping the German

advance units by cutting the narrow neck of the German salient which had suddenly divided them as if by magic. Their effort narrowed that neck still further but failed to cut it, while from the tip of the salient the Germans pushed rapidly northward along the coast. The Allied forces in Belgium were now in their turn trapped. On May 28 the Belgian army surrendered as we have seen. Most of the British and a part of the French units north of the German salient just escaped total disaster by embarking at Dunkirk with the loss of their guns and heavy equipment. Here, for the first time during the campaign, German air superiority was less marked. Dunkirk was finally occupied by the Germans on June 4.

The Germans, now having the French in the open before them, uncovered by fortifications and practically unsupported by the British, next attempted the military destruction of the French army. This time their main effort was directed south-eastward across the rear of the great fortified salient of the Maginot Line, at first in the general direction of Reims, then in that of Langres, and finally to the Swiss border. Meanwhile secondary attacks were aimed toward Paris and Rouen. These final operations against the French were begun on June 5, and on June 22 the French signed an Armistice on conditions so severe that they amounted practically to the unconditional surrender of France in Europe. Within only a little over five weeks from the first stroke in the West, the vast affair had been concluded.

Now comes the almost incredible part of the matter: this sweeping and amazingly rapid success was won at an almost negligible cost in blood. Reducing the figures in each case to the nearest thousand, the published statement of the German Higher Command admitted only twenty seven thousand killed, one hundred and eleven thousand wounded, and eighteen thousand missing, a total of one hundred and fifty six thousand.

The non-German losses have not yet been given in such detail, but as a basis for discussion we may take the following estimates published by Hanson W. Baldwin in the New York Times of July 8, 1940:

THE WESTERN FRONT, MAY 10 TO JULY 1.

	Killed	Wounded	Prisoners and Missing	Total
Germany	27,074	111,034	18,384	156,492 ^a
France	60,000	300,000	800,000-1,600,000	1,160,000-1,960,000 ^b
Britain	2,500- 10,000?	12,500- 20,000	25,000- 35,000	40,000- 65,000 ^b
Belgium	5,000- 10,000	20,000- 50,000	500,000	525,000- 560,000 ^c
Nethl'ds	5,000	10,000- 30,000	300,000	315,000- 335,000 ^c
Total	99,574-112,074	453,534-511,034	1,643,384-2,453,384	2,196,492-3,076,492

^a Figures given in official announcements of country concerned.^b Figures given by semi-official announcement of country concerned.^c Unofficial estimates only.

CIVILIAN AIR RAID CASUALTIES FOR WAR TO JULY 1.

	Killed	Wounded	Total
Germany	457	1,067	1,524 ^a
France	900?	5,000?	5,900 ^{bc}
Britain	100	400	500 ^{ac}
Poland	?	?	5,000-15,000 ^c
Netherlands	50-1,000?	2,000?	2,050- 3,000 ^c
Belgium	50- 500?	3,000?	3,050- 3,500 ^c
Italy	110	417	527 ^{ac}
Misc. (North Africa, etc.).....	7	29	36 ^{ac}
Totals	1,674-3,074	11,913	18,587-79,987

^a Figures given in official announcements of country concerned.^b Figures given by semi-official announcement of country concerned.^c Unofficial estimates only.

GRAND TOTALS BY COUNTRIES FOR THE WAR TO JULY 1.

	Killed	Wounded	Prisoners and Missing	Total
Germany	50,000	165,000	28,000	243,000 ^{ac}
France	70,000	318,000	1,600,000	1,988,000 ^{bc}
Britain	20,000	34,000	36,000	90,000 ^{bc}
Italy	1,000	1,500	2,000	4,500 ^c
Poland	60,000	160,000?	400,000	620,000 ^c
Netherlands	6,000	25,000	300,000	331,000 ^c
Belgium	10,000	35,000	500,000	545,000 ^c
Norway	4,000	5,000	50,000	59,000 ^c
Total	221,000	743,500	2,916,000	4,013,500

^a Figures given in official announcements of country concerned.^b Figures given by semi-official announcement of country concerned.^c Unofficial estimates only.

Obviously the non-German figures are tentative, there is a difference of eight hundred thousand between the two figures given for French soldiers prisoners and missing. Also it is impossible either to prove or to disprove the good faith of the German figures. In 1914-'18 the French and British Intelligence Departments, checking the published totals of German losses against the figures given for losses in particular German units, concluded that the published totals were systematically

understated; but today no figures for particular units seem to have been given out.

Without attempting here to decide the question, let us assume for the sake of the argument that the Germans are understating. If so, how far do they understate? A multiple of ten, which would make their dead exceed a quarter of a million and their wounded exceed a million, would seem far too high. Even such figures, however, are low in comparison with the results obtained in May and June 1940 if we remember the two hundred and seventy eight thousand German and four hundred and sixty thousand French killed and wounded at Verdun in 1916, or the sixty thousand English killed and wounded on the first day of the Somme offensive alone. In the text accompanying the Tables just quoted, Mr. Baldwin says: "Although the announced German figures seem incomplete, it is doubtful if the total German casualties for the period mentioned . . . exceed double the number claimed. Indeed the official German figures may well be correct. . . ." Independently of Mr. Baldwin, a friend of the present writer who is peculiarly well acquainted with the German army and the German military mind also believes a multiple of two to be the highest permissible. No competent estimator known to the present writer thinks a multiple of five to be possible. To multiply by five would make the German dead a hundred and thirty five thousand and their wounded over half a million, and even such figures are trivial when contrasted with those of the last war.

Moreover the reasons for this comparative bloodlessness are obvious. To quote Mr. Baldwin again: "...the speedy German thrusts and the great German superiority in planes and mechanized forces, manned by relatively few men, should have kept down the German losses.

"It can be said with some certainty that the ratio of German to Allied deaths is probably not far from correct, so, if the French lost more than 60,000 men, the Germans may have lost more than the 27,000 they admit.

"Contrary to predictions, the casualties in modern war seem to be lighter than had been expected. Certainly the estimated 200,000 to 300,000 dead in ten months of this war are small compared to the 8,500,000 dead in more than four years of the

World War. The war of manoeuvre is obviously less deadly than the war of position, the war of speed less lethal than the war of attrition."

In other words, while the strategy of 1914-'18 was one of clubbing and of hammer blows, that of 1939-'40 has so far been one of rapier thrusts. Its object has been not so much to kill the enemy's soldiers as to confuse and bewilder his command in order to take his men prisoners. Thus, if we consider only the actual operations of the present conflict, we must conclude that the "Reformation Of War" which General Fuller envisaged in 1923 is well on its way.

Were this all, then one would say with certainty: the curve of war is descending.

* * * *

On the other hand, while the fighting itself has been moving toward a comparative bloodlessness, all the corollaries, the accompaniments or, if you prefer, the "social factors" of war have been rising. In the New York Times of June 10, 1940, Anne O'Hare McCormick wrote: "On the wall of a downtown office hangs a framed copy of The London Times containing the account of the Battle of Waterloo, printed five days after the event. The story managed to make the front page, but only to the extent of a couple of sticks at the bottom of a column. Although small forces were engaged compared to the vast armies locked in the present slaughter in France, Waterloo was more decisive than the battle for Paris; yet the space accorded the report of the victory suggests that it excited less interest in England than the local and personal news of the day." Today, on the contrary the world is obsessed with strife.

Military expense together with the resulting rate of taxation has reached such a point that rearmament and a general mobilization alone, without an angry shot fired, might well make wealthy states bankrupt. The control of governments not only over the diminishing purses of the governed but also over their every daily action has never been so despotic. On the emotional side, probably never before has fear so overshadowed the planet. As we saw in the last chapter, the dictators have made a business of whipping up popular passions. In other

words they have copied the worst feature of previous democracies. Probably there has never been a time which had so little regard for truth. In the combined economic, emotional and intellectual confusion, Twentieth Century war has become a social revolution in itself.

Which tendency, the good or the evil, will determine the future?

* * * *

One could of course argue that the rapid and comparatively bloodless German conquests have resulted merely from the German superiority in military technique, together with various internal weaknesses of their victims. Recalling the speedy victories of the young Napoleon and the successful Prussian lightning wars of 1866 and 1870, one might reason that—once the new strategy and tactics of planes and tanks has become common property—than between opponents of about equal resources and political cohesion mass wars might again be prolonged to the same degree of exhaustion and strain as in 1918. According to this contention, the only difference between such future wars and that of 1914-'18 would be that the "nations in arms" would have become "nations in arsenals." Indeed one might go further, and might say that before the last effects of the present war will have been felt, the civilization and social order of thirty years ago, already shaken by 1914-'18, will have disappeared in barbarism.

Fortunately, prophets are not infallible merely because they prophesy doom. After fully admitting the possibility of the gloomy happenings just mentioned, and without claiming to know the future, we may take from the past and present two arguments in the opposite sense.

The first argument is historical. The military technique characteristic of an era is an integral part of that era, and when that technique profoundly changes, the change is a symptom that the era itself is ending. Thus the army of the Roman Republic ceased to be a civic militia and became professional less than a long lifetime before the establishment of the Roman Empire and the peace of Augustus which ended the great wars of the Ancient World. In turn, the weakening of the profes-

sional Roman army at the beginning of the Dark Ages indicated that the Imperial order was about to pass away. Charlemagne's legal recognition of the shift from professional forces to aristocratic feudal militias foreshadowed the new civilization of the Middle Ages, and the late-Medieval return to professional troops did not long precede the end of the Medieval scheme. More particularly, as we saw in one of the opening paragraphs of this chapter, the strictly disciplined and regularly supplied soldiers of Gustavus Adolphus anticipated the socially harmless armies which fought the strictly limited Eighteenth Century wars.

By this test the unity of our own period of mass armies, fierce popular passions including nation worship, and revolutionary wars shaking society to its foundations, is evident. As we have seen, it was the democratic politicians of the First French Republic who in 1793 with their levy-in-mass transformed the French State from a public utility into a cannibalistic goddess. After the lull between Waterloo and 1914, exactly the same process began again, but since 1918 a new technical element has appeared. Not only did the mourning and disgusted peoples unanimously say "this must not happen again," but also the soldiers themselves said the same thing—with the very different meaning that the latter determined to replace irrational with rational war. In estimating how far the principle of the armed horde has weakened, we need only cite the German army of today, with only a third of its strength even nominally infantry, and with much if not most of its real work done by the long-service professionals of its Tank Corps and of the German Air Force. If the historical instances cited in the last paragraph have meaning, then we may assume that mass armies with their attendant popular passions may continue to decline.

The second argument is drawn from the general mood or atmosphere of the last twenty years. Instead of considering the fierce popular passions of our democratic and revolutionary era as results of the mass armies, we may reverse the order and assume the armed hordes to be results of those passions. Here we encounter an extraordinary but notorious fact: never within human record has any great war been fought with so little gen-

eral enthusiasm to back it. The words of R. M. Johnston which head this chapter: "the ordinary citizen of France, Germany and England has had it deeply wrought into his consciousness that it is worse than unprofitable to take the field as a soldier" have remained to this day as true as when he wrote them in his "First Reflections On The Campaign of 1918" twenty years ago. The raw French levies of 1793, for all their indiscipline and their panics, had enough spirit to check the ill-commanded regulars who opposed them. As late as 1812, twenty years after the beginning of the long Revolutionary-Napoleonic struggle, the Neapolitans and Swiss who followed Napoleon into Russia fought there as gallantly as the French. The solemn exaltation of 1914 and '15 is still well remembered, but since 1918 nothing of the sort has been seen except among the Poles, and among the Finns when attacked by Soviet Russia. The pacifism which followed the Armistice of November 11 was worldwide. Although some of its expressions were silly and others base, the feeling which inspired them was universal and real. Until last September it was Hitler's proudest boast that he had expanded the Reich without the death of a single German soldier. The Munich settlement was matter for general rejoicing in France and England as in Germany. Since the beginning of the present war the testimony of travelers returning from Europe has been unanimous: nowhere have the peoples shown the slightest joy in battle. To take only one straw in the wind, on July 15, 1940, the New York Herald Tribune printed as: "the report of an American correspondent . . . : 'In the many visits I made to the front I . . . never heard French soldiers sing.' It is not news that the armies of the democracies went to war without joy, but . . . the French were unable to fling one chorus into the face of fate." All this is in full accord with the record of the trivial Danish, Norwegian and Dutch resistance to invasion, the Belgians surrendering after eighteen days although that surrender jeopardized their Allies, and the extreme rarity—at least—of desperate last stands among the French.

Nor is the picture very different on the other side. The vehement and systematic stimulation of popular passion by the dictators has carried their masses along only in a spirit

of dull resignation. As yet the Italian war effort has been far from intense. In Germany the fanaticism of certain groups, chiefly of young people, seems too feverish to last. There is at least some reason to believe that even the tremendous victories of their armies have kindled little genuine and general rejoicing among the German people.

Be this as it may, can any sensible man or woman believe that further experience of the sufferings of the present conflict will rekindle the blaze of that crusading spirit which all middle aged people can remember?

These words are written on the last day of July 1940, and as yet the chances of such a moral miracle seem nil. To date, emotionally as well as technically, the already descending "curve" of war seems likely to fall still further.

* * * *

One would gladly add that the lessening importance of the armed horde, the comparative bloodlessness of the new military methods and the conspicuous lack of general enthusiasm for war have been accompanied by the visible growth of some moral unity throughout the world. Could that be truly said, then there would be reason to hope for a new and strict limitation of war in our own day. Unhappily the words "peace in our time" still have little meaning. The supplementing of patriotism by a positive and genuine loyalty to some new political scheme, the restoration of Christian brotherhood in a Universal Church, even a softening of quarrels by a renewed humanistic cult of moderation, any and all of these things remain to be the work of the future. It is at least permitted to us to hope that the descending curve of war may be a preliminary to better things, that our children may refuse to be crushed either by dictators or by governments calling themselves democracies.

Bibliography

- Aristotle, "Politics," Trans. Benjamin Jowett, Oxford Un. Press, London, 1926.
- Atkinson, Charles Francis, "Franco-German War," 11th ed. Encyc. Britt.
- , "French Revolutionary Wars," 11th ed. Encyc. Britt.
- , "Seven Weeks War," 11th ed. Encyc. Britt.
- Bacon, Francis, "Essays," Oxford Un. Press, London, 1914.
- Bainville, Jacques, "Napoleon," Trans., Hamish Miles, Little, Brown, Boston, 1933.
- Belloc, Hilaire, "The French Revolution," Williams and Norgate, London, 1911.
- , "Marie Antoinette," Doubleday, N. Y. 1913.
- , "Poitiers," Hugh Rees, London, 1913.
- , "A General Sketch Of The European War"; "The First Phase," 2 Vols., Nelson, London, 1915.
- , "Napoleon," Cassell, London, 1932.
- , "The Crusade," Cassell, London, 1937.
- Bland, Humphrey, "A Treatise Of Military Discipline," 4th ed. London, 1740.
- Bloch, I. S., "The Future Of War In Its Economic And Political Relations. Is War Now Possible?" Trans. R. C. Long, Doubleday and McClure, N. Y. 1899.
- Boucher, Général Arthur, "Les Lois Éternelles De La Guerre," Berger-Levrault, Paris, 1922.
- Cantril, Hadley, "The Invasion From Mars," Princeton Un. Press, Princeton, 1940.
- Carnot, Hippolyte, "Mémoires," 2 Vols., Hachette, Paris, 1907.
- Castex, Admiral R., "Synthèse De La Guerre Sous-Marine," Chalmel, Paris, 1920.
- , "Théories Stratégiques," 5 Vols., Société D'Éditions, Paris, 1929-1935.
- Caulaincourt, Gen. De, "With Napoleon In Russia," Morrow, N. Y. 1935.
- Chuquet, Arthur, "Les Guerres De La Révolution," 11 Vols., Cerf and Chailley, Paris, 1887-1896.

- Clausewitz, Gen. Carl Von, "On War," 3 Vols. Trans. Col. J. J. Graham, Kegan Paul, N. Y. 1918.
- Coffin, Lt. C. E. Jr. (U.S.N.), "Effects Of Aerial Bombardment In China," "U. S. Naval Institute Proceedings," Sept. 1938.
- Colin, Commandant J., "Education Militaire De Napoléon," Chapelot, Paris, 1901.
- , "Campagne De 1793 En Alsace et Dans Le Palatinat," Chapelot, Paris, 1902.
- , "The Transformations Of War," Trans. Brevet-Major L. H. R. Pope-Hennessy, Hugh Rees, London, 1912.
- Conger, A. L. "The Rise Of U. S. Grant," Century Co. N. Y. 1931.
- Crutwell, C. R. M. F. "A History Of The Great War" 1914-1918, Oxford University Press, N. Y. 1934.
- Derrécagaix, Gen. V. B. "Le Maréchal Berthier," 2 Vols. Chapelot, Paris, 1904.
- Dodge, Theodore Ayrault, "Napoleon," 3 Vols. Houghton Mifflin, Boston, 1904-1907.
- Dorn, Walter L., "Competition For Empire, 1740-1763," Harpers, N. Y. 1940.
- Doyle, Arthur Conan, "Through The Magic Door," Doubleday Page, N. Y. 1919.
- Dumolin, Maurice, "Précis D'Histoire Militaire," 3 Vols. and Atlas, Paris, 1906.
- DuPicq, Col. Ardant Du, "Études Sur Le Combat," Librairie Militaire, Chapelot, Paris, 1904.
- Dupuy, R. Ernest & Geo. Fielding Eliot, "If War Comes," Macmillan, N. Y. 1937.
- Putrait-Crozon, Henri, "Précis De L'Affaire Dreyfus," Nouvelle Librairie Nationale, Paris, 1909.
- Duval, Général, "Les Leçons De La Guerre D'Espagne," Plon, Paris, 1938.
- Eliot, Geo. Fielding & R. Ernest Dupuy, "If War Comes," Macmillan, N. Y. 1937.
- Ferrero, Guglielmo, "Peace And War," Trans. Bertha Pritchard, Macmillan, London, 1933.
- , "Aventure," Librairie Plon, Paris, 1936.
- Feuquières, Marquis De, "Mémoires," 4 Vols. Paris, 1775.
- Foch, Maréchal F., "De La Conduite De La Guerre," Berger Levrault, Paris, 4th ed. 1918 (1st ed. 1903-'04).
- , "The Principles Of War," Trans. Hilaire Belloc, Holt, N. Y. 1920.

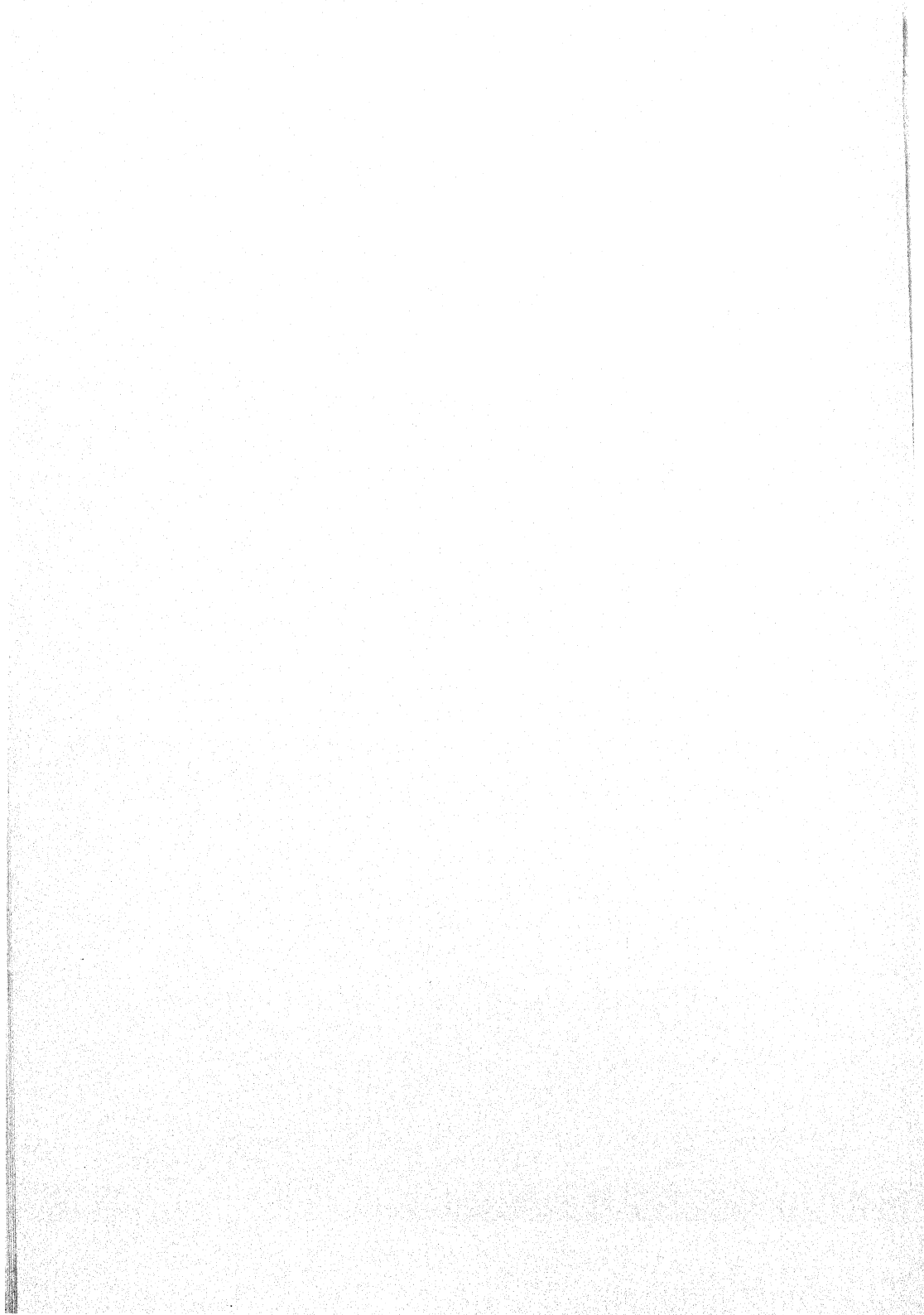
- Fonblanque, Edward Barrington, "Political And Military Episodes," Macmillan, London, 1876.
- Fortescue, J. W., "A History Of The British Army," 13 Vols., Macmillan, London and N. Y. 1899-1930.
- French, Field-Marshal F. of Ypres, "1914," Houghton Mifflin, Boston, 1919.
- Fuller, Major-General J. F. C., "Tanks In The Great War 1914-1918," Murray, London, 1920.
- , "The Reformation Of War," Hutchinson, London, 1923.
- , "The Natural History Of War," Woolwich, London, 1930.
- , "The Dragon's Teeth," Constable, London, 1932.
- , "War And Western Civilization 1832-1932," Duckworth, London, 1932.
- , "The Army In My Time," Rich and Cowan, London, 1935.
- , "The First Of The League Wars," Eyre and Spottiswood, London, 1936.
- , "Decisive Battles," 2 Vols. Eyre and Spottiswood, London, 1939-1940.
- Gaule, Charles De, "Vers L'Armée De Métier," Berger Levrault, Paris, 1934.
- Gibbon, Edward, "The History Of The Decline And Fall Of The Roman Empire," 6 Vols., Harper, N. Y. 1900.
- Goltz, Lt. Col. Baron Von Der, "The Nation In Arms," Trans. Philip A. Ashworth, Allen, London, 1887.
- Grotius, Hugo, "The Rights Of War And Peace," Trans. A. C. Campbell, Dunne, N. Y. and London, 1901.
- Grouard, Lt. Col., "La Conduite De La Guerre Jusqu'A La Bataille De La Marne," Chapelot, Paris, 1922.
- Guibert, Jacques Antoine Hippolyte, "Essai Général De Tactique," London, 1772.
- Hamley, Edward, "The Operations Of War," Bruce Blackwood, London, 1878.
- Hart, Capt. Liddell, "Reputations Ten Years After," Little, Brown, Boston, 1928.
- , "The Real War," Faber and Faber, London, 1930.
- , "The Ghost Of Napoleon," Faber and Faber, London, 1933.
- , "Lawrence Of Arabia," Cape, London, 1934-1935.
- , "The War In Outline," 1914-1918, Faber and Faber, London, 1936.
- , "The Defence Of Britain," Random House, N. Y. 1939.
- Houssaye, Henry, "1814-1815," 3 Vols., Perrin, Paris, 1917-1921.

- Johnston, R. M., "Bull Run," Houghton Mifflin, Boston, 1913.
- , "Clausewitz To Date," Cambridge, 1917.
- , "First Reflections On The Campaign Of 1918," Holt, N. Y. 1920.
- Jonini, Baron De, "Life Of Napoleon," 2 Vols. and Atlas, Trans. H. W. Halleck, LL. D. Washington, 1863.
- , "The Art Of War," Trans. Capts. G. H. Mendell and W. P. Craighill, U. S. A., Lippincott, Phila., 1879, 1st pub. 1836.
- Kipling, Rudyard, "The Peace Of Dives," "Collected Verse," Doubleday Page, 1907.
- Kluck, Alex. Von (Generaloberst), "The March On Paris," "The Battle Of The Marne," 1914, Trans. Arnold Pub., London, 1920.
- Knox, Capt. Dudley W. (U. S. N.) (Ret.), "A History Of The U. S. N.," Putnam, N. Y. 1936.
- Lawrence, T. E., "Seven Pillars Of Wisdom," Cape, London, 1935, Privately 1926.
- Livermore, Thos. L., "Numbers And Losses In The Civil War In America, 1861-65," Houghton Mifflin, Boston and N. Y. 1900.
- Lohn, Ella, "Desertion During The Civil War," Century, 1928.
- Lucas, Lt. Col., "The Evolution Of Tactical Ideas In France And Germany, 1914-18," Trans. Major P. V. Kieffer, Berger Levrault, Paris, 1923.
- Ludendorff, Erich Von, "Ludendorff's Own Story," 2 Vols., Harper, N. Y. and London, 1919.
- , "Coming War," Faber, London, 1931.
- Martin, Lt. Col. Lawrence, "The Treaties Of Peace 1919-1923," N. Y. Carnegie Endowment For International Peace, 1914.
- Manning, Lt. Col. Clarence A. (U. S. R.), "Battle On The Vistula," "Journal Of The American Military Institute," Vol. III, No. 1, Spring 1939.
- Masefield, John, "The Tragedy Of Pompey The Great," Sidgwick and Jackson, London, 1913.
- Maude, Col. F. N., "Conscription," Encyc. Britt. 11th ed.
- , "Seven Weeks War," Encyc. Britt. 11th ed.
- , "War And The World's Life," Smith-Elder, London, 1907.
- McEntee, Col. Girard Lindsley (U. S. A.) (Ret.), "The Military History Of The World War," Scribner, N. Y. 1937.
- Merten Sergeant Fred. W., "The Prussian National Defense System." From The Reorganization Of 1814 To The Reorganization Of 1860. "Belgian Neutrality And The World War." (Unpublished Monographs).

- Mercier, L. J. A., "Charlemagne" "Moraga Quarterly," Summer No. 1936.
- Metternich, see Encyc. Britt. 11th ed. VI, 972.
- Moltke, Maréchal de, "Correspondance Militaire," 5 Vols., Lavauzelle, Paris.
- Montecuculi, see Turpin de Crissé, Count.
- Monteilhet, J., "Les Institutions Militaires De La France, 1814-1932," Librairie Félix Alcan, Paris, 1932.
- Mowat, R. B., "The Age Of Reason," Houghton Mifflin, Boston, 1934.
- Napier, Lt. Col. W. F. P., "History Of The Peninsular War," 6 Vols., Murray and Boone, London, 1828-1840.
- Nickerson, Hoffman, "The Turning Point Of The Revolution," Houghton Mifflin, Boston, 1928.
- , "Can We Limit War?" Stokes, N. Y. 1934.
- , See "Warfare."
- Painter, Sidney, "English Castles In The Middle Ages," Speculum, July, 1935.
- Percin, Le Général, "Le Combat," Librairie Félix Alcan, Paris, 1914.
- Phillips, Major Thomas R. (U. S. A.), "Roots Of Strategy," Military Service Pub. Co. Pennsylvania, 1940.
- Phipps, Col. Ramsay Weston, "The Armies Of The First French Republic And The Rise Of The Marshals Of Napoleon I," 4 Vols., Oxford Un. Press, 1926-1935.
- Pilsudski, Joseph, "L'Année 1920," Trans. Lt. Col. Bte Ch. Jeze and Commandant J. A. Teslar, La Renaissance Du Livre, 1929.
- Puységur, Jacques De Chastenot De, "Mémoires Avec Des Instructions Militaires," 2 Vols., Paris, 1747.
- , "L'Art De La Guerre," Paris, 1749.
- Remarque, Erich, Maria, "All Quiet On The Western Front," Little, Brown, Boston, 1929.
- Renn, Ludwig, "Warfare," Trans. Edward Fitzgerald, Oxford Un. Press, N. Y. 1939.
- Repington, Lt. Col. C., "The First World War, 1914-1918," 2 Vols., Houghton Mifflin, Boston, 1921.
- Richmond, Admiral Sir Herbert W., "Imperial Defence and Capture At Sea In War," Hutchinson, London, 1932.
- Sakurai, Lt. Tadayoshi, "Human Bullets," Trans. Masujiro Honda, Houghton Mifflin, Boston, 1908.
- Sankey, Capt. C. E. P., "The Campaign Of The Future," "A Possible Development," "Royal Engineers Journal," January, 1907.

- Santa Cruz de Marcenado, Marqués De, "Reflexiones Militares," 2 Vols., Madrid, 1787.
- Saxe, Marshal, "Memoirs" (Eng. Trans.), London, 1757.
- Scammell, Lt. Col. Jos. M., "Force And Policy" "Army Ordnance," Sept.-Oct. 1936, quoting Quarré De Verneuil; "La France Militaire Pendant La Révolution," Dumaine, Paris, 1878.
- Schlieffen, Gen. Field-Marshal Count Alfred Von, "Cannae," Command and General Staff School Press, Kansas, 1931.
- Séché, Alphonse, "Les Guerres D'Enfer," Payot, Paris, 1919.
- Seeckt, Gen. Von, "Thoughts Of A Soldier," Trans. Gilbert Waterhouse, Ernest Benn, London, 1930.
- Simons, Commander Bentham, U. S. N., "Some Notes On Old Guns," "U. S. Naval Institute Proceedings," Vol. 63, May, 1937, No. 411.
- Spaulding, Col. Oliver L., "The United States Army In War And Peace," Putnam, 1937.
See "Warfare."
- Spengler, Oswald, "The Decline Of The West," Trans. Charles Francis Atkinson, Allen and Unwin, London, 1926.
- Taine, Hippolyte, "Les Origines De La France Contemporaine," "La Revolution Le Government Revolutionnaire," Hachette, Paris, 1884.
- , "Les Origines De La France Contemporaine," "Le Régime Moderne," Hachette, Paris, 1891.
- Thomason, Capt. John W. Jr., "Jeb Stuart," Scribner, N. Y. 1930.
- Thucydides V., Trans. Rev. Henry Dale, London, Bell, 1888.
- Toynbee, Arnold (and others), "The Legacy Of Greece," Oxford Un. Press, London, 1921.
- Toynbee, Arnold J., "A Study Of History," 6 Vols., Oxford Un. Press, London, 1939.
- Trevelyan, George Macaulay, "England Under Queen Anne," Longmans Green, London, 1930.
- Turpin De Crissé, Count, "Commentaires Sur Les Mémoires de Montecuculi," Paris, 1769.
- Tyng, Sewell, "The Campaign Of The Marne," Longmans Green, London, 1935.
- Upton, Bvt. Maj. Gen. Emory, U. S. A., "The Military Policy Of The U. S." 4th Impression 1917.
- Vagts, Alfred, "The History Of Militarism," Norton, N. Y. 1937.
- Valarché, Col. E., "Cannes Et La Marche De Von Klück Sur Paris," Berger Levrault, Paris, 1929.

- Vattel, Emmerich De, "The Law Of Nations, Or The Principles Of Natural Law," Trans. Charles G. Fenwick, Carnegie Institution, Washington, 1916.
- Vauban, "De L'Attaque Et De La Defense Des Places," De Hondt, The Hague, 1737.
- Vauthier, "Douhet," "La Doctrine De Guerre Du Général Douhet," Preface du Maréchal Petain, Berger Levrault, Paris, 1935.
- Vegetius, "De Re Militari."
- "Warfare," Col. Oliver L. Spaulding (U. S. A.), Hoffman Nickerson, and Col. J. W. Wright (U. S. A.), Harcourt Brace, N. Y. 1925. 2nd ed. "Infantry Journal," Washington, 1937.
- Wedgwood, C. V., "The Thirty Years War," Yale Un. Press., New Haven, 1939.
- Wright, Col. J. W., See "Warfare."
- Zwehl, Gen. Johann (Hans) Von, Vol 12, Meners (German) Lexikon, 1930.



Notes On Sources

Title Page Motto: Taine: "Origines," Tome I of "Le Régime Moderne," 288-9.

GENERAL

The theme of no book known to the present writer except Fuller's "War and Western Civilization 1832-1932" approaches that of the present work. Mention should also be made of Fuller's remarkable pamphlet "The Natural History of War." Colin's valuable "Transformations De La Guerre"—the quotations in the text are from the admirable English translation by R. Pope-Hennessy—suffers not only from the defects noted in Chapter V but also from the fallacy of attributing everything in war to technical causes, weapons, formations and organization, while neglecting social and political factors. Monteilhet's "Institutions Militaires De La France" is useful not only for his own country but also for his references to Prussia. Unfortunately, however, the author's left wing prejudices and dislike of professional soldiers inspire him with a confidence in militia unjustified by dispassionate examination of military history.

Mention should also be made of the able military articles by C. F. Atkinson and F. N. Maude in the eleventh edition of the *Encyclopedia Britannica*.

In the following Notes when only one work by an author has been cited in the Bibliography, the reference may be given under the author's name alone. Many references to the authors named above and also to those named as general sources for particular chapters are omitted.

CHAPTER I

Mottoes: Clausewitz, Foch: "Principles," 22, quoting Clausewitz. See also Dupuy and Eliot: "If War Comes," 23. Goltz: 13.

PAGES LINES

11	5-7	Masefield: "Pompey the Great," 42.
12	7-10	Mercier: in the "Moraga Quarterly," Summer No. 1936.

PAGES LINES

- 13 8-12 Bacon: 9.
 15-16 Taine: "Origines," Tome I, "Le Régime Moderne,"
 288-90.

CHAPTER II

For military technique throughout the field of this Chapter see "Warfare," Spaulding, Nickerson and Wright. For another account emphasizing social and political factors, see "Can We Limit War?," Nickerson, 36-95. For the ancient cycle of war, see also Toynbee in "The Legacy of Greece," 289-320.

The passages from Puysegur, Turpin de Crissé, Santa Cruz, Saxe, Montecuculi and Feuquières are from Colonel John W. Wright's Notes.

Motto: Aristotle: "Politics," VII, 14-5.

PAGES LINES

- 22 18-27 Thucydides V, 104-5.
 29-30 Painter: "English Castles in the Middle Ages" in
 "Speculum," July 1935, 329-30.
 30 8-9 Belloc: "Poitiers," 105.
 31 24-8 Belloc: "The Crusade," 70-4.
 33 26-39 Wedgwood, 516.
 34 Doyle, 164-6.
 34-5 Grotius, 367-8.
 37-9 Vattel, 304-5, 257, 283, 289, 356.
 41 { 20-1, Dumolin I, 34, etc.
 { 24-8
 41 22-3 Schlieffen, 6-10.
 42 5-17 Goltz, 14-15.
 Maude: "War and the World's Life," 7.
 Toynbee: "A Study of History," IV, 146.
 43-6 Vauban, 1-2, 44, 57-60, 69, 80-1, 95, 97-9, 109-10,
 137-9, 186, 216.
 47-8 Bland 157-8.
 48 5-9 Spaulding, Nickerson & Wright: "Warfare," 548.
 48-9 Unpublished letter, from Hilaire Belloc.
 50 12-17 Saxe: "Reveries" trans. in Phillips "Roots of Strat-
 egy," 243.
 50-1 Fonblanque, 193. See also Nickerson: "The Turn-
 ing Point of the Revolution."
 52-3 Foch: "Principles," 27-8.

PAGES	LINES	
53	1-3	See also Phillips for another version of Saxe's words, 298.
53	24-30	Phillips, 298-9.
54-5		Fortescue I, 354-5.
60	11 et seq.	Trevelyan, 433.
61-2		Mowat.
62-3		Gibbon IV, 92. See also Toynbee: "Study of History," IV, 148-9.
63		Ferrero: "Peace and War," esp. 55, 63-4.

CHAPTER III

Out of the enormous mass of Revolutionary-Napoleonic literature I have followed chiefly Phipps and Chuquet, where the latter is available, for the details of the early Revolutionary campaigns. Knowledge of the important Italian campaigns of 1796-'7 has been greatly increased by Ferrero's "Aventure" of which a number of the principal theses are confirmed by passages hitherto little noted in Dodge and in Jomini's "Life Of Napoleon." The graph on French Revolutionary Numbers is from Carnot's "Memoires," although Mr. T. H. Thomas has shown me that these must be used with caution, and his view is considerably confirmed by Colin's "Campagne De 1793 En Alsace." For the Napoleonic conscription I have followed chiefly Taine and Houssaye.

Motto: Taine: "Origines," Tome I, "Le Régime Moderne," 134, N.1.

PAGES	LINES	
64		Carnot: "Memoires" I, 379.
67-9		Taine supra, 288, N.1.
69-70		Belloc: "French Revolution," 111-3. See also Fortescue IV, part I, 26-51.
72	29-32	Guibert I, 38.
72	33-7	Carnot: "Memoires" I, 139.
74	7-10	Fortescue III, 531, N. 1.
75	5-10	Phipps I, 17-8.
75	13-14	Belloc: "Marie Antoinette," 419.
76	12-20	Belloc: "French Revolution," 114.
76	34-8	Phipps I, 20, Fortescue IV, part I, 37-8.
77-8		Phipps I, 121.
78		For Valmy see Chuquet: "Valmy" Cerf, Paris, 1887.
83	3-7	Fortescue IV, part I, 121.
86		Toynbee: "A Study Of History" V, 151, N. 2.

PAGES	LINES	
90	14-19	Phipps I, 221.
90-1		Ferrero: "Aventure," 91-2.
91	32-7	Scammell, J. M.: "Force And Policy" in "Army Ordinance" Sept.-Oct. 1936, quoting Quarré de Verneuil "La France Militaire Pendant La Révolution," 29. Dumairn, Paris, 1878.
92	4-7	Belloc: "French Revolution," 137.
92	14-16	Phipps I, 322.
92-3		Taine: "Origines" Tome V, of "La Revolution Le Government Jacobine," 92-3.
94	34-5	Phipps I, 303.
96		Banville: "Napoleon," 46.
97	26-33	Colin: "Éducation Militaire De Napoléon."
106	1-10	Phipps IV, 193-4.
108-9		Derrecagaix: "Berthier" I, 372-94. See also in Encyc. Brit. Atkinson: "French Revolutionary Wars," 11th ed., and Maude "Conscription."
109	22-3	Belloc: "French Revolution," 204.
110	9-11	Taine: "Origines" Tome I of "Le Régime Moderne," 295.
111-12		Goltz, 6-7.
114	26-31	Castex: "Théories Stratégiques" V, 290-1.
117		Castex: "Théories Stratégiques" I, 97-9. See also Belloc: "Napoleon," 58-62.
118	3-7	Dodge: "Napoleon," III, 318. See also Fuller: "Decisive Battles," 584, quoting Fézensac and Cantal.
118-9		Spengler I, 150, N. 3.
120	5-6	Conversation with Metternich at Schönbrunn, A. D. 1805; Encyc. Brit., 11th ed., VI, 972.
121		Caulaincourt, 367.
124-5		Carnot: "Memoires" II, 503-5.

CHAPTER IV

For French military policy throughout the period see Monteilhet.

For Prussian organization see Von Der Goltz, Merten and Monteilhet. For Clausewitz see J. J. Graham's Translation, which includes not only "On War" but also the "Instructions For The Crown Prince," the "Organic Division Of Forces," and the "Guide To Tactics," and also Johnston's "Clausewitz To Date." For the

American Civil War see chiefly Conger's "Rise Of U. S. Grant" and Spaulding's "The U. S. Army," 243-336. The figures for losses are chiefly from Livermore, secondarily from Upton and Lohn. For 1866, see chiefly Schlieffen, Moltke's "Correspondance" V, also Atkinson's and Maude's "Seven Weeks War" in 11th ed. Encyc. Brit.

Mottoes: Monteilhet, 2. Goltz, 3-4.

PAGES	LINES	
135-6		Monteilhet, 40-1.
137	8-18	Jomini: "Art Of War," 16-35.
138	2-3	Jomini: "Art Of War," 360.
138-40		Jomini: "Art Of War," 138.
140	14-22	"Clausewitz To Date," 15.
		"Clausewitz To Date," 34 et seq.
141	5-8	Clausewitz: "Instructions To The Crown Prince," in "On War" III, 209.
142	3-6	Clausewitz: "On War" I, 2.
142	6-12	Clausewitz: "On War" I, 288.
142		Clausewitz: "On War" III, 87-8.
143	1	Clausewitz: "On War" I, 4.
143	3-4	Clausewitz: "On War" I, 212.
143	4-5	Clausewitz: "On War" I, 238.
143	5-7	Clausewitz: "On War" I, 239.
143	7-8	Clausewitz: "On War" II, 9.
143	8-10	Clausewitz: "On War" I, 45.
143	10-11	Clausewitz: "On War" I, 285.
143	11-12	Clausewitz: "On War" I, 286.
143	14-19	Clausewitz: "Instructions To The Crown Prince," in "On War" III, 210-1. Clausewitz: "To Date," 40-8.
143	22-4	Clausewitz: "On War" I, 195.
143	26-8	Clausewitz, "On War" I, 2.
143	36	Clausewitz: "On War" III, 88.
144	27-31	Vagts, Ch. VI, N. 62, 496-7.
147	22-30	Nickerson: "Turning Point Of The Revolution," 12-4, 17-8.
149	19-21	Johnston: "Bull Run," 7.
151		Jomini: "Art Of War," 48-9.
151-2		Jomini: "Art Of War," 355, 359-60.
153-4		Ferrero: "Peace And War," 59.
156-8		Knox: "History Of The U. S. Navy," 192-301.
161	7-10	Southern Historical Society Papers, XII, Jan.-Feb. 1884, 73.

PAGES	LINES	
162		Johnston: "Bull Run."
165	20-3	Thomason: "Jeb Stuart," 440.
166	28-36	Conger: "Grant," 327-8.
167-8		Atkinson in 11th ed. Encyc. Brit. I, 824-5.
169	19-21	Fuller: "War And Western Civilization," 98.
169	23-6	Simons, Commander Bentham Simons, U. S. N. "Some Notes On Old Guns" in "U. S. Naval In- stitute Proceedings," May 1937.
169	30-5	Johnston: "Bull Run," 8-9.
170	20-4	Nickerson: "Turning Point Of The Revolution," 56, 164.
170-1		Lyman, Col. Theodore: "Meade's Headquarters, 1863-1865," 101; quoted by Fuller: "War And Western Civilization," 95-6.
171	3-20	Ropes, John Codman: "Military Historical Society Of Massachusetts Papers" IV, 365, 405; quoted by Fuller: "War And Western Civilization," 96-7.
174		Vagts, opposite, 198.
178	15-24	Colin: "Transformations," 303-16.
181		Foch: "Principles," 160-231.

CHAPTER V

For 1870 see chiefly Schlieffen, Moltke's "Correspondance" I and II and Atkinson's "Franco-German War" in 11th ed. Encyc. Brit. For Schlieffen Plan see McEntee "Military History Of The World War."

Motto: Foch: "Principles," 35.

PAGES	LINES	
188	15-19	Colin: "Transformations," 37.
196, 198		Fuller: "War And Western Civilization," 127.
201	19-22	Maude: "War And The World's Life," p. vii.
203	16-18	Colin: "Transformations," 45.
203	24	Fuller: "War And Western Civilization," 150.
203	29-30	Fuller: "War And Western Civilization," 151.
203	32-3	Fuller: "War And Western Civilization," 151.
203	36-7	Fuller: "War And Western Civilization," 151.
204	26-30	Fuller: "War And Western Civilization," 124.
205	18-20	Colin: "Transformations," 43.
205	27-9	Johnston: "Bull Run," 7, N. 2.
205	35-6	Johnston: "Clausewitz To Date," 17.

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205-6		Johnston: "Clausewitz To Date," 17.
207		Foch: "Conduite," 1.
207	31	Foch: "Principles," 34.
207	32	Foch: "Principles," 284.
208	1-3	Foch: "Principles," 286.
208		Foch: "Principles," 32.
209	3-8	Fuller: "War And Western Civilization," 159.
209	31-3	Foch: "Principles," (see Chapter Motto), 35.
210	{ 17-22 35-9	Repington I, 16.
210	29-33	Belloc: "General Sketch Of The European War" I, "The First Phase," 183 et seq.
211	12-15	Foch: "Principles," 337.
211	18-31	Foch: "Principles," 349-350.
211-12		Foch: "Conduite," 45, N.
212	7-12	Foch: "Conduite," 45.
212-13		Fuller: "War And Western Civilization," 152-3.
216	29-31	Fuller: "War And Western Civilization," 171.
217-18		Verbal communication from Major-General Dennis Nolan, U. S. A. ret.
217-21		Besides the "General Sources," for Port Arthur see Sakurai: "Human Bullets."
221	13-19	Colin: "Transformations," 178.
221-2		Foch: "Conduite," pp. xv-xvii.
222	5-13	Colin: "Transformations," 192.
222	28-9	Colin: "Transformations," 331.
222-3		Colin: "Transformations," 325-6.
223	18-22	Colin: "Transformations," 172.
223	24-5	Colin: "Transformations," 331.
224	8-19	Fuller: "Dragon's Teeth," 256-7.
		See also Liddell Hart: "Ghost Of Napoleon," 136-7.
		See also Boucher, 199-216.
225	1-3	Ardant Du Picq, 5.
225-6		Kipling: "Collected Verse," 182-6.
226-7		Percin, 300.
227	4-9	Fuller: "War And Western Civilization," 189-90.
229-30		Encyc. Brit. 11th ed.; VI, 972-4.
230-1		Foch: "Principles," 26-7, 34, etc.
231	6-9	Liddell Hart: "Lawrence Of Arabia," 278.
231	23-31	Bloch: pp. IX-XI. See also XXXI.
231	35-6	Bloch: pp. XXXVII-XXXVIII.

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232	1-2	Bloch: p. XVII.
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234	21-3	Bloch: p. XXVII.
234	25-6	Bloch: p. LX.
234	29-33	Bloch: p. XLII.
235	6-16	Lucas: "Evolution Of Tactical Ideas In France And Germany," 17, N. 1, quoting Col. Mayer in the "Revue Militaire Suisse," May 1902.
238	19-25	McEntee: "Military History Of The World War," 6-8; esp. fig. 9, p. 8.
238	30-3	Foch: "Principles," 285.
238	37-8	Dutrait-Crozon, Henri: "Précis De L'Affair Dreyfus."
239-43		McEntee, 8-14. See also Liddell Hart: "Real War," 60-3.
239-40		Johnston: "Clausewitz To Date," 80-5.
244	15-18	Lucas: "Evolution Of Tactical Ideas," quoting Grandmaison. 1.

CHAPTER VI

For 1914-'18 in general, see chiefly McEntee and Lucas. For the Marne see also Tyng, Grouard and Valarché. For the Cambrai attack see Fuller, esp. "Tanks In The Great War," 135-153. For the American Army in '17-'18, see also Spaulding, "U. S. Army," pp. 409-57.

Mottoes: Liddell Hart: "Lawrence Of Arabia," 278. Von Seeckt: "Thoughts Of A Soldier," 54.

PAGES	LINES	
247	33-9	"Ludendorff's Own Story," I, 42.
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254-5		Cruttwell, 28-9. See also Kluck, 99.
256	27-32	Liddell Hart: "Reputations Ten Years After," quoting Falkenhayn's Diary, 52.

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259-60		French: "1914," 120-7.
260	27-9	French: "1914," 131-6.
261-2		Besides the "General Sources" for this Chapter see Kluck, 136-8.
263	14-18	Liddell Hart: "Real War," 117.
263-4		Johnston: "Clausewitz To Date," 40.
268	33-4	Clausewitz: "On War," I, 4.
278-9		Vauban, 1.
284-5		Fuller: "War And Western Civilization," 227-8.
285-6		Castex: "Théories Stratégiques" V, 366-9.
286	9-16	Lucas, 50-1.
289		Castex: "Guerre Sous-Marine," 25-9, 57-8.
292	3-4	Fuller: "Tanks In The Great War," 54-9.
292-3		Lucas, quoting Ludendorff, 146.
293	32-3	Lucas, 173.
303	20-2	Lucas, 251-2.
305	23-5	Fuller: "Reformation Of War," 115, N. 1. For Von Zwehl, see also Meners (German) "Lexikon," Vol. 12.
305	26	Remarque: "All Quiet On The Western Front," 279-80.
306	35-8	McEntee, 512-3.
308-9		Liddell Hart: "The Real War," 464.
309	15	Lucas, 268.

CHAPTER VII

For the Polish campaign of 1919-'20, see "Battle On The Vistula" by Lieut. Col. Clarence A. Manning, U. S. R. in No. I, Vol. III of the "Journal Of The American Military Institute," Spring number 1939, based on study of both the Polish and Russian sources in the original languages; also Pilsudski "L'Annee 1920." For Douhet and Douhetism see Vauthier "Douhet." For the Italian conquest of Ethiopia see Fuller "First Of The League Wars" and "Decisive Battles," pp. 984-1004. For the Spanish Civil War, see Duval "Leçons De La Guerre D'Espagne" and Fuller "Decisive Battles" II, pp. 1104-31.

Motto: Liddell Hart: "The War In Outline," p. IX.

PAGES	LINES	
314-5		"Treaties Of Peace 1919-'23," 123.
322	24-5	Séché, Alphonse: "Guerres D'Enfer."

PAGES LINES

- 333 19-30 Richmond: "Imperial Defence," 137.
 333 35-6 Richmond: "Imperial Defence," 137.
 344-5 Liddell Hart: "The Real War," 47.
 345-6 Fuller: "Reformation Of War," 116.
 Coffin, Lt. C. E. Jr. U. S. N.: "Effects Of Aerial Bombardment In China," "U. S. Naval Institute Proceedings," Sept. 1938, 1317.
 350 22-5 Fuller: "Natural History Of War," 35-6.
 353-54 N. Y. Times, Feb. 1, '39: "How Barcelona Dug In." Also reprints of Hugh Gibson's broadcast of Sept. 10, '39.
 356 1-11 Renn: "Warfare," 28, 45.
 359 20-4 N. Y. Herald Tribune, Oct. 30, '38.
 359-60 Cantril: "The Invasion From Mars." Also press clippings.
 360 7-9 N. Y. Times, May 6, '39.
 360 17-21 Walter Lippmann in N. Y. Herald Tribune, July 12, '38.

CHAPTER VIII

The historian of contemporary events must liberally use press clippings. He must also—like many if not most of the great historical writers of former days—rely largely on private sources of information.

Motto: Johnston: "First Reflections On The Campaign Of 1918," 74.

PAGES LINES

- 364 14-18 N. Y. Times, Oct. 16, '39.
 364 19-22 N. Y. Times, Oct. 16, '39.
 365 29-33 New York Times, Oct. 31, '39, & Dec. 3, '39.
 382 29-32 Hanson W. Baldwin in N. Y. Times, July 8, '40.
 385 14-16 N. Y. Times, Oct. 30, '39.
 N. Y. Tribune, Dec. 3, '39.
 386 25-6 N. Y. Times, Nov. 30, '39.
 386-7 Cartoon by Thomas in the "Detroit News," reproduced in N. Y. Times, Dec. 3, '39.
 390 30-5 Merten: unpublished monograph "Belgian Neutrality And The World War."
 391 20-1 Johnston: "Clausewitz To Date," 19, quoting Cardinal de Retz. See also p. 131 on the "Theory Of The Impossible," quoting Dragomiroff.

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